SEQUENCE LISTING

<110> Frudakis, Tony N.
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Deng, Ta

<120> COMPOSITIONS AND METHODS FOR THE THERAPY
AND DIAGNOSIS OF BREAST CANCER

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<140> US
<141> 2001-08-07

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Gln Gly His Asp Glu Ser Pro Gly Val Phe Leu Glu His Leu Gln Glu
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Ala Tyr Arg Ile Tyr Thr Pro Phe Asp Leu Ala Ala Pro Glu Asn Ser
65                  70                  75                  80
His Ala Leu Asn Leu Ala Phe Val Ala Gln Ala Ala Pro Asp Ser Lys
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825, 829, 838, 845, 849, 852, 855, 856, 859, 874, 876, 877,
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<211> 196
<212> DNA
<213> Homo sapiens

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<212> DNA
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<220>
<221> misc_feature
<222> 82, 162, 287
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tgacaccaac ttacactgtg gnctccaata aactgcttct ttcctattcc ctctctatta 120
aataaaataa ggaaaacgat gtctgtgtat agccaagtca gntatcctaa aaggagatac 180
taagtgacat taaatatcag aatgtaaaac ctgggaacca ggttcccagc ctgggattaa 240
actgacagca agaagactga acagtactac tgtgaaaagc ccgaagnggc aatatgttca 300
ctctaccgtt gaaggatggc tgggagaatg aatgctctgt cccccagtcc caagctcact 360
tactatacct cctttatagc ctaggaga 388

<210> 13
<211> 337
<212> DNA
<213> Homo sapiens

<400> 13
tagtagttgc ctataatcat gtttctcatt attttcacat tttattaacc aatttctgtt 60
taccctgaaa aatatgaggg aaatatatga aacagggagg caatgttcag ataattgatc 120
acaagatatg atttctacat cagatgctct ttcctttcct gtttatttcc tttttatttc 180
ggttgtgggg tcgaatgtaa tagctttgtt tcaagagaga gttttggcag tttctgtagc 240
ttctgacact gctcatgtct ccaggcatct atttgcactt taggaggtgt cgtgggagac 300
tgagaggtct atttttttcca tatttgggca actacta 337

<210> 14
<211> 571
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 435, 441, 451, 456, 462, 479, 488, 489, 509, 568
<223> n = A,T,C or G

<400> 14
tagtagttgc catacagtgc ctttccattt atttaacccc cacctgaacg gcataaactg 60
agtgttcagc tggtgttttt tactgtaaac aataaggaga ctttgctctt catttaaacc 120
aaaatcatat ttcatatttt acgctcgagg gtttttaccg gttccttttt acactcctta 180
aaacagtttt taagtcgttt ggaacaagat attttttctt tcctggcagc ttttaacatt 240
atagcaaatt tgtgtctggg ggactgctgg tcactgtttc tcacagttgc aaatcaaggc 300
atttgcaacc aagaaaaaaa aatttttttg ttttatttga aactggaccg gataaacggt 360
gtttggagcg gctgctgtat atagttttaa atggtttatt gcacctcctt aagttgcact 420
tatgtggggg ggggntttg natagaaagt ntttantcac anagtcacag ggacttttnt 480
cttttggnna ctgagctaaa aagggctgnt tttcgggtgg gggcagatga aggctcacag 540
gaggcctttc tcttagaggg gggaactnct a 571

<210> 15
<211> 548
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 224, 291, 326, 376, 388, 394, 428, 433, 507, 514
<223> n = A,T,C or G

<400> 15
tatatattta ataacttaaa tatattttga tcacccactg gggtgataag acaatagata 60
taaaagtatt tccaaaaagc ataaaaccaa agtatcatac caaaccaaat tcatactgct 120
tcccccaccc gcactgaaac ttcaccttct aactgtctac ctaaccaaat tctacccttc 180
aagtctttgg tgcgtgctca ctactctttt tttttttttt tttnttttgg agatggagtc 240
tggctgtgca gcccaggggt ggagtacaat ggcacaacct cagctcactg naacctccgc 300
ctcccaggtt catgagattc tcctgnttca gccttcccag tagctgggac tacaggtgtg 360
catcaccatg cctggntaat ctttttttngt tttngggtag agatgggggt tttacatgtt 420
ggccaggntg gtntcgaact cctgacctca agtgatccac ccacctcagg ctcccaaagt 480
gctaggatta cagacatgag ccactgngcc cagncctggt gcatgctcac ttctctaggc 540
aactacta 548

<210> 16
<211> 638
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 471, 488
<223> n = A,T,C or G

<400> 16
ttccgttatg cacatgcaga atattctatc ggtacttcag ctattactca ttttgatggc 60
gcaatccgag cctatcctca agatgagtat ttagaaagaa ttgatttagc gatagaccaa 120
gctggtaagc actctgacta cacgaaattg ttcagatgtg atggatttat gacagttgat 180
ctttggaaga gattattaag tgattatttt aaagggaatc cattaattcc agaatatctt 240
ggtttagctc aagatgatat agaaatagaa cagaaagaga ctacaaatga agatgtatca 300

ccaactgata ttgaagagcc tatagtagaa aatgaattag ctgcatttat tagccttaca 360
catagcgatt ttcctgatga atcttatatt cagccatcga catagcatta cctgatgggc 420
aaccttacga ataatagaaa ctgggtgcgg ggctattgat gaattcatcc ncagtaaatt 480
tggatatnac aaaatataac tcgattgcat ttggatgatg gaatactaaa tctggcaaaa 540
gtaactttgg agctactagt aacctctctt tttgagatgc aaaatttttct tttagggttt 600
cttattctct actttacgga tattggagca taacggga 638

<210> 17
<211> 286
<212> DNA
<213> Homo sapiens

<400> 17
actgatggat gtcgccggag gcgaggggcc ttatctgatg ctcggctgcc tgttcgtgat 60
gtgcgcggcg attgggctgt ttatctcaaa caccgccacg gcggtgctga tggcgcctat 120
tgccttagcg gcggcgaagt caatgggcgt ctcaccctat ccttttgcca tggtggtggc 180
gatggcggct tcggcggcgt ttatgacccc ggtctcctcg ccggttaaca ccctggtgct 240
tggccctggc aagtactcat ttagcgattt tgtcaaaata ggcgtg 286

<210> 18
<211> 262
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 184, 234, 240
<223> n = A,T,C or G

<400> 18
tcggtcatag cagccccttc ttctcaattt catctgtcac taccctggtg tagtatctca 60
tagccttaca tttttatagc ctcctccctg gtctgtcttt tgattttcct gcctgtaatc 120
catatcacac ataactgcaa gtaaacattt ctaaagtgtg gttatgctca tgtcactcct 180
gtgncaagaa atagtttcca ttaccgtctt aataaaattc ggatttgttc tttnctattn 240
tcactcttca cctatgaccg aa 262

<210> 19
<211> 261
<212> DNA
<213> Homo sapiens

<400> 19
tcggtcatag caaagccagt ggtttgagct ctctactgtg taaactccta aaccaaggcc 60
atttatgata aatggtggca ggatttttat tataaacatg tacccatgca aatttcctat 120
aactctgaga tatattcttc tacatttaaa caataaaaat aatctatttt taaaagccta 180
atttgcgtag ttaggtaaga gtgtttaatg agagggtata aggtataaat caccagtcaa 240
cgtttctctg cctatgaccg a 261

<210> 20
<211> 294
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 194, 274, 283, 294
<223> n = A,T,C or G

<400> 20
tacaacgagg cgacgtcggt aaaatcggac atgaagccac cgctggtctt ttcgtccgag 60
cgataggcgc cggccagcca gcggaacggt tgcccggatg gcgaagcgag ccggagttct 120
tcggactgag tatgaatctt gttgtgaaaa tactcgccgc cttcgttcga cgacgtcgcg 180
tcgaaatctt cganctcctt acgatcgaag tcttcgtggg cgacgatcgc ggtcagttcc 240
gccccaccga aatcatggtt gagccggatg ctgnccccga agncctcgtt tgtn 294

<210> 21
<211> 208
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 116, 132, 140, 160, 164, 191, 197, 199
<223> n = A,T,C or G

<400> 21
ttggtaaagg gcatggacgc agacgcctga cgtttggctg aaaatctttc attgattcgt 60
atcaatgaat aggaaaattc ccaaagaggg aatgtcctgt tgctcgccag tttttntgtt 120
gttctcatgg anaaggcaan gagctcttca gactattggn attntcgttc ggtcttctgc 180
caactagtcg ncttgcnang atcttcat 208

<210> 22
<211> 287
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 4, 25, 121, 168, 207, 212
<223> n = A,T,C or G

<400> 22
nccnttgagc tgagtgattg agatntgtaa tggttgtaag ggtgattcag gcggattagg 60
gtggcgggtc acccggcagt gggtctcccg acaggccagc aggatttggg gcaggtacgg 120
ngtgcgcatc gctcgactat atgctatggc aggcgagccg tggaaggngg atcaggtcac 180
ggcgctggag ctttccacgg tccatgnatt gngatggctg ttctaggcgg ctgttgccaa 240
gcgtgatggt acgctggctg gagcattgat ttctggtgcc aaggtgg 287

<210> 23
<211> 204
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 121, 131, 162, 184, 197
<223> n = A,T,C or G

<400> 23
ttgggtaaag ggagcaagga gaaggcatgg agaggctcan gctggtcctg gcctacgact 60
gggccaagct gtcgccgggg atggtggaga actgaagcgg gacctcctcg aggtcctccg 120
ncgttacttc nccgtccagg aggagggtct ttccgtggtc tnggaggagc ggggggagaa 180
gatnctcctc atggtcnaca tccc 204

<210> 24
<211> 264
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 171, 206
<223> n = A,T,C or G

<400> 24
tggattggtc aggagcgggt agagtggcac cattgagggg atattcaaaa atattatttt 60
gtcctaaatg atagttgctg agtttttctt tgacccatga gttatattgg agtttatttt 120
ttaactttcc aatcgcatgg acatgttaga cttatttttct gttaatgatt nctattttta 180
ttaaattgga tttgagaaat tggttnttat tatatcaatt tttggtattt gttgagtttg 240
acattatagc ttagtatgtg acca 264

<210> 25
<211> 376
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 103, 111, 192, 196, 199, 220, 224, 230, 251, 268, 283, 317,
352, 370, 374
<223> n = A,T,C or G

<400> 25
ttacaacgag gggaaactcc gtctctacaa aaattaaaaa attagccagg tgtggtggtg 60
tgcacccgca atcccagcta cttgggaggt tgagacacaa gantcaccta natgtgggag 120
gtcaaggttg catgagtcat gattgtgcca ctgcactcca gcctgggtga cagaccgaga 180
ccctgcctca anaganaang aataggaagt tcagaaatcn tggntgtggn gcccagcaat 240
ctgcatctat ncaacccctg caggcaangc tgatgcagcc tangttcaag agctgctgtt 300
tctggaggca gcagttnggg cttccatcca gtatcacggc cacactcgca cnagccatct 360
gtcctccgtn tgtnac 376

<210> 26
<211> 372
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 231, 312, 340
<223> n = A,T,C or G

<400> 26

ttacaacgag gggaaactcc gtctctacaa aaattaaaaa attagccagg tgtggtggtg 60
tgcacctgta atcccagcta cttgggcggc tgagacacaa gaaccaccta aatgtgggag 120
ggtcaaggtt gcatgagtca tgatcgcgcc actgcactcc agcctgggtg acagactgag 180
accctgcctc aaaagaaaaa gaataggaag ttcagaaacc ctgggtgtgg ngcccagcaa 240
tctgcattta aacaatccct gcaggcaatg ctgatgcagc ctaagttcaa gagctgctgt 300
tctggaggca gnagtaaggg cttccatcca gcatcacggn caacactgca aaagcacctg 360
tcctcgttgg ta 372

<210> 27
<211> 477
<212> DNA
<213> Homo sapiens

<400> 27
ttctgtccac atctacaagt tttatttatt ttgtgggttt tcagggtgac taagtttttc 60
cctacattga aaagagaagt tgctaaaagg tgcacaggaa atcatttttt taagtgaata 120
tgataatatg ggtccgtgct taatacaact gagacatatt tgttctctgt ttttttagag 180
tcacctctta aagtccaatc ccacaatggt gaaaaaaaaa tagaaagtat ttgttctacc 240
tttaaggaga ctgcagggat tctccttgaa aacggagtat ggaatcaatc ttaaataaat 300
atgaaattgg ttggtcttct gggataagaa attcccaact cagtgtgctg aaattcacct 360
gacttttttt gggaaaaaat agtcgaaaat gtcaatttgg tccataaaat acatgttact 420
attaaaagat atttaaagac aaattctttc agagctctaa gattggtgtg gacagaa 477

<210> 28
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 16, 30, 255, 413
<223> n = A,T,C or G

<400> 28
tctncaacct cttgantgtc aaaaaccttn taggctatct ctaaaagctg actggtattc 60
attccagcaa aatccctcta gtttttggag tttcctttta ctatctgggg ctgcctgagc 120
cacaaatgcc aaattaagag catggctatt ttcgggggct gacaggtcaa aaggggtgta 180
aatccgataa gcctcctgga ggtgctctaa aaacactcct ggtgactcat catgcccctg 240
gacgacttca atcgncttag acaagtttat aggtttctgg gcagctccct gaatacccac 300
gaggagatac cggtggaaat cgtcaaaagt tctccctcca cttgagaaat ttgggtccca 360
attaggtccc aattgggtct ctaatcacta ttcctctagc ttcctcctcc ggnctattgg 420
ttgatgtgag gttgaaga 438

<210> 29
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 391, 481, 483, 490, 497, 510, 527, 532, 540, 545, 593, 612
<223> n = A,T,C or G

<400> 29

aagagggtac cagccccaag ccttgacaac ttccataggg tgtcaagcct gtgggtgcac 60
agaagtcaaa aattgagttt tgggatcctc agcctagatt tcagaggata taaagaaaca 120
cctaacacct agatattcag acaaaagttt actacaggga tgaagctttc acggaaaacc 180
tctactagga aagtacagaa gagaaatgtg ggtttggagc ccccaaacag aatcccctct 240
agaacactgc ctaatgaaac tgtgagaaga tggccactgt catccagaca ccagaatgat 300
agacccacca aaaacttatg ccatattgcc tataaaacct acagacactc aatgccagcc 360
ccatgaaaaa aaaactgaga agaagactgt nccctacaat gccaccggag cagaactgcc 420
ccaggccatg gaagcacagc tcttatatca atgtgacctg gatgttgaga catggaatcc 480
nangaaatcn ttttaanact tccacggttn aatgactgcc ctattanatt cngaacttan 540
atccnggcct gtgacctctt tgctttggcc attccccctt tttggaatgg ctntttttt 600
cccatgcctg tnccctctta 620

<210> 30
<211> 100
<212> DNA
<213> Homo sapiens

<400> 30
ttacaacgag ggggtcaatg tcataaatgt cacaataaaa caatctcttc ttttttttt 60
ttttttttt ttttttttt ttttttttt ttttttttt 100

<210> 31
<211> 762
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 626, 652, 662, 715, 736
<223> n = A,T,C or G

<400> 31
tagtctatgc gccggacaga gcagaattaa attggaagtt gccctccgga ctttctaccc 60
acactcttcc tgaaaagaga aagaaaagag gcaggaaaga ggttaggatt tcattttcaa 120
gagtcagcta attaggagag cagagtttag acagcagtag gcaccccatg atacaaacca 180
tggacaaagt ccctgtttag taactgccag acatgatcct gctcaggttt tgaaatctct 240
ctgcccataa aagatggaga gcaggagtgc catccacatc aacacgtgtc caagaaagag 300
tctcagggag acaagggtat caaaaaacaa gattcttaat gggaaggaaa tcaaaccaaa 360
aaattagatt tttctctaca tatatataat atacagatat ttaacacatt attccagagg 420
tggctccagt ccttggggct tgagagatgg tgaaaacttt tgttccacat taacttctgc 480
tctcaaattc tgaagtatat cagaatggga caggcaatgt tttgctccac actggggcac 540
agacccaaat ggttctgtgc ccgaagaaga gaagcccgaa agacatgaag gatgcttaag 600
gggggttggg aaagccaaat tggtantatc ttttcctcct gcctgtgttc cngaagtctc 660
cnctgaagga attcttaaaa ccctttgtga ggaaatgccc ccttaccatg acaantggtc 720
ccattgcttt tagggngatg gaaacaccaa gggttttgat cc 762

<210> 32
<211> 276
<212> DNA
<213> Homo sapiens

<400> 32
tagtctatgc gtgtattaac ctcccctccc tcagtaacaa ccaaagaggc aggagctgtt 60
attaccaacc ccattttaca gatgcatcaa taatgacaga gaagtgaagt gacttgcgca 120

cacaaccagt aaattggcag agtcagattt gaatccatgg agtctggtct gcactttcaa 180
tcaccgaata ccctttctaa gaaacgtgtg ctgaatgagt gcatggataa atcagtgtct 240
actcaacatc tttgcctaga tatcccgcat agacta 276

<210> 33
<211> 477
<212> DNA
<213> Homo sapiens

<400> 33
tagtagttgc caaatatttg aaaatttacc cagaagtgat tgaaaacttt ttggaaacaa 60
aaacaaataa agccaaaagg taaaataaaa atatctttgc actctcgtta ttacctatcc 120
ataacttttt caccgtaagc tctcctgctt gttagtgtag tgtggttata ttaaactttt 180
tagttattat tttttattca cttttccact agaaagtcat tattgattta gcacacatgt 240
tgatctcatt tcatttttc tttttatagg caaaatttga tgctatgcaa caaaaatact 300
caagcccatt atcttttttc cccccgaaat ctgaaaattg caggggacag agggaagtta 360
tcccattaaa aaattgtaaa tatgttcagt ttatgtttaa aaatgcacaa aacataagaa 420
aattgtgttt acttgagctg ctgattgtaa gcagttttat ctcaggggca actacta 477

<210> 34
<211> 631
<212> DNA
<213> Homo sapiens

<400> 34
tagtagttgc caattcagat gatcagaaat gctgctttcc tcagcattgt cttgttaaac 60
cgcatgccat ttggaacttt ggcagtgaga agccaaaagg aagaggtgaa tgacatatat 120
atatatatat attcaatgaa agtaaaatgt atatgctcat atactttcta gttatcagaa 180
tgagttaagc tttatgccat tgggctgctg catattttaa tcagaagata aaagaaaatc 240
tgggcatttt tagaatgtga tacatgtttt tttaaaactg ttaaatatta tttcgatatt 300
tgtctaagaa ccggaatgtt cttaaaattt actaaaacag tattgtttga ggaagagaaa 360
actgtactgt ttgccattat tacagtcgta caagtgcatg tcaagtcacc cactctctca 420
ggcatcagta tccacctcat agctttacac attttgacgg ggaatattgc agcatcctca 480
ggcctgacat ctgggaaagg ctcagatcca cctactgctc cttgctcgtt gatttgtttt 540
aaaatattgt gcctggtgtc acttttaagc cacagccctg cctaaaagcc agcagagaac 600
agaacccgca ccattctata ggcaactact a 631

<210> 35
<211> 578
<212> DNA
<213> Homo sapiens

<400> 35
tagtagttgc catcccatat tacagaaggc tctgtataca tgacttattt ggaagtgatc 60
tgttttctct ccaaacccat ttatcgtaat ttcaccagtc ttggatcaat cttggtttcc 120
actgatacca tgaaacctac ttggagcaga cattgcacag ttttctgtgg taaaaactaa 180
aggtttattt gctaagctgt catcttatgc ttagtatttt ttttttacag tggggaattg 240
ctgagattac attttgttat tcattagata ctttgggata acttgacact gtcttctttt 300
tttcgctttt aattgctatc atcatgcttt tgaaacaaga acacattagt cctcaagtat 360
tacataagct tgcttgttac gcctggtggt ttaaaggact atctttggcc tcaggttcac 420
aagaatgggc aaagtgtttc cttatgttct gtagttctca ataaaagatt gccaggggcc 480
gggtactgtg gctcgcactg taatcccagc actttgggaa gctgaggctg gcggatcatg 540
ttagggcagg tgttcgaaac cagcctgggc aactacta 578

<210> 36
<211> 583
<212> DNA
<213> Homo sapiens

<400> 36
tagtagttgc ctgtaatccc agcaactcag gaggctgggg caggagaatc agttgaacct 60
gggaggcaga agttgtaatt agcaaagatc gcaccattgc acttcagcct gggcaacaag 120
agtgagattc catctcaaaa acaaaaaaaa gaaaaagaaa agaaaaggaa aaaacgtata 180
aacccagcca aaacaaaatg atcattcttt taataagcaa gactaattta atgtgtttat 240
ttaatcaaag cagttgaatc ttctgagtta ttggtgaaaa tacccatgta gttaatttag 300
ggttcttact tgggtgaacg tttgatgttc acaggttata aaatggttaa caaggaaaat 360
gatgcataaa gaatcttata aactactaaa aataaataaa atataaatgg ataggtgcta 420
tggatggagt ttttgtgtaa tttaaaatct tgaagtcatt ttggatgctc attggttgtc 480
tggtaatttc cattaggaaa aggttatgat atggggaaac tgtttctgga aattgcggaa 540
tgtttctcat ctgtaaaatg ctagtatctc agggcaacta cta 583

<210> 37
<211> 716
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 669, 673, 678, 686, 704
<223> n = A,T,C or G

<400> 37
gatctactag tcatntggat tctatccatg gcagctaagc ctttctgaat ggattctact 60
gctttcttgt tctttaatcc agacccttat atatgtttat gttcacaggc agggcaatgt 120
ttagtgaaaa caattctaaa ttttttattt tgcattttca tgctaatttc cgtcacactc 180
cagcaggctt cctgggagaa taaggagaaa tacagctaaa gacattgtcc ctgcttactt 240
acagcctaat ggtatgcaaa accacttcaa taaagtaaca ggaaaagtac taaccaggta 300
gaatggacca aaactgatat agaaaaatca gaggaagaga ggaacaaata tttactgagt 360
cctagaatgt acaaggcttt ttaattacat attttatgta aggcctgcaa aaaacaggtg 420
agtaatcaac atttgtccca ttttacatat aaggaaactg aagcttaaat tgaataattt 480
aatgcataga ttttatagtt agaccatgtt caggtcccta tgttatactt actagctgta 540
tgaatatgag aaaataattt tgttattttc ttggcatcag tattttcatc tgcaaaataa 600
agctaaagtt atttagcaaa cagtcagcat agtgcctgat acatagtagg tgctccaaac 660
atgattacnc tantattngg tattanaaaa atccaatata ggcntggata aaaccg 716

<210> 38
<211> 688
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 260
<223> n = A,T,C or G

<400> 38
ttctgtccac atatcatccc actttaattg ttaatcagca aaactttcaa tgaaaaatca 60
tccattttaa ccaggatcac accaggaaac tgaaggtgta ttttttttta ccttaaaaaa 120

aaaaaaaaaa accaaacaaa ccaaaacaga ttaacagcaa agagttctaa aaaatttaca 180
tttctcttac aactgtcatt cagagaacaa tagttcttaa gtctgttaaa tcttggcatt 240
aacagagaaa cttgatgaan agttgtactt ggaatattgt ggatttttt ttttgtctaa 300
tctcccccta ttgttttgcc aacagtaatt taagtttgtg tggaacatcc ccgtagttga 360
agtgtaaaca atgtatagga aggaatatat gataagatga tgcatcacat atgcattaca 420
tgtagggacc ttcacaactt catgcactca gaaaacatgc ttgaagagga ggagaggacg 480
gcccagggtc accatccagg tgccttgagg acagagaatg cagaagtggc actgttgaaa 540
tttagaagac catgtgtgaa tggtttcagg cctgggatgt ttgccaccaa gaagtgcctc 600
cgagaaattt ctttcccatt tggaatacag ggtggcttga tgggtacggt gggtgaccca 660
acgaagaaaa tgaaattctg ccctttcc 688

<210> 39
<211> 585
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 15, 24, 53, 108, 135, 465, 477, 495, 499, 504, 517, 530,
580, 581
<223> n = A,T,C or G

<400> 39
tagtagttgc cgcnnaccta aaanttggaa agcatgatgt ctaggaaaca tantaaaata 60
gggtatgcct atgtgctaca gagagatgtt agcatttaaa gtgcatantt ttatgtattt 120
tgacaaatgc atatncctct ataatccaca actgattacg aagctattac aattaaaaag 180
tttggccggg cgtggtgggc ggtggctgac gcctgtaatc ccagcacttt gggaggccga 240
ggcacgcgga tcacgaggtc gggagttcaa gaccatcctg gctaacacgg tgaaagtcca 300
tctctactaa aaatacgaaa aaattacccc ggcgtggtgg cgggcgcctg tagtcccagc 360
tactccggag gctgaggcag gagaatggcg tgaacccagg acacggagct tgcagtgtgc 420
caacatcacg tcactgccct ccagcctggg ggacaggaac aagantcccg tcctcanaaa 480
agaaaaatac tactnatant ttcnacttta ttttaantta cacagaactn cctcttggta 540
ccccccttacc attcatctca cccacctcct atagggcacn nctaa 585

<210> 40
<211> 475
<212> DNA
<213> Homo sapiens

<400> 40
tctgtccaca ccaatcttag aagctctgaa aagaatttgt ctttaaatat cttttaatag 60
taacatgtat tttatggacc aaattgacat tttcgactgt tttttccaaa aaagtcaggt 120
gaatttcagc acactgagtt gggaatttct tatcccagaa gaccaaccaa tttcatattt 180
atttaagatt gattccatac tccgttttca aggagaatcc ctgcagtctc cttaaaggta 240
gaacaaatac ttcctatttt tttttcacca ttgtgggatt ggactttaag aggtgactct 300
aaaaaaacag agaacaaata tgtctcagtt gtattaagca cggacccata ttatcatatt 360
cacttaaaaa aatgatttcc tgtgcacctt ttggcaactt ctcttttcaa tgtagggaaa 420
aacttagtca ccctgaaaac ccacaaaata aataaaactt gtagatgtgg acaga 475

<210> 41
<211> 423
<212> DNA
<213> Homo sapiens

<400> 41
taagagggta catcgggtaa gaacgtaggc acatctagag cttagagaag tctggggtag 60
gaaaaaaatc taagtattta taagggtata ggtaacattt aaaagtaggg ctagctgaca 120
ttatttagaa agaacacata cggagagata agggcaaagg actaagacca gaggaacact 180
aatatttagt gatcacttcc attcttggta aaaatagtaa cttttaagtt agcttcaagg 240
aagatttttg gccatgatta gttgtcaaaa gttagttctc ttgggtttat attactaatt 300
ttgttttaag atccttgtta gtgctttaat aaagtcatgt tatatcaaac gctctaaaac 360
attgtagcat gttaaatgtc acaatatact taccatttgt tgtatatggc tgtaccctct 420
cta 423

<210> 42
<211> 527
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 470, 475, 515, 522
<223> n = A,T,C or G

<400> 42
tctcctaggc taatgtgtgt gtttctgtaa aagtaaaaag ttaaaaattt taaaaataga 60
aaaaagctta tagaataaga atatgaagaa agaaaatatt tttgtacatt tgcacaatga 120
gtttatgttt taagctaagt gttattacaa aagagccaaa aaggttttaa aaattaaaac 180
gtttgtaaag ttacagtacc cttatgttaa tttataattg aagaaagaaa aacttttttt 240
tataaatgta gtgtagccta agcatacagt atttataaag tctggcagtg ttcaataatg 300
tcctaggcct tcacattcac tcactgactc acccagagca acttccagtc ctgtaagctc 360
cattcgtggt aagtgcccta tacaggtgca ccatttattt tacagtattt ttactgtacc 420
ttctctatgt ttccatatgt ttcgatatac aaataccact ggttactatn gcccnacagg 480
taattccagt aacacggcct gtatacgtct ggtanccta gngaaga 527

<210> 43
<211> 331
<212> DNA
<213> Homo sapiens

<400> 43
tcttcaacct cgtaggacaa ctctcatatg cctgggcact atttttaggt tactaccttg 60
gctgcccttc tttaagaaaa aaaaaagaag aaaaaagaac ttttccacaa gtttctcttc 120
ctctagttgg aaaattagag aaatcatgtt tttaattttg tgttatttca gatcacaaat 180
tcaaacactt gtaaacatta agcttctgtt caatcccctg ggaagaggat tcattctgat 240
atttacggtt caaaagaagt tgtaatattg tgcttggaac acagagaacc agttattaac 300
ttcctactac tattatataa taaataataa c 331

<210> 44
<211> 592
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 473
<223> n = A,T,C or G

<400> 44
ggcttagtag ttgccaggca aaatarcgtt gattctcctc aggagccacc cccaacaccc 60
ctgtttgctt ctagacctat acctagacta aagtcccagc agacccctag aggtgaggtt 120
cagagtgacc cttgaggaga tgtgctacac tagaaaagaa ctgcttgagt tttctaattt 180
atataagcag aaatctggag aagagtcata ggaatggata ttaagggtgt gagataatgg 240
cggaaggaat atagagttgg atcaggctgg acttattgat ttgaacccac taagtagaga 300
ttctgctttt gatgttgcag ctcagggagt taaaaaaggt tttaatggtt ctaatagttt 360
atttgcttgg ttagctgaaa tatggataaa agatggccca ctgtgagcaa gctggaaatg 420
cctgatctct ctcagtttaa tgtagaggaa gggatccaaa agtttaggga ganttggatg 480
ctggraktgg attggtcact ttgrgaccta cccwtcccag ctgggagggt ccagaagata 540
cacccttgac caacgctttg cgaaatggat ttgtgatggc ggcaactact aa 592

<210> 45
<211> 567
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 522, 561, 566
<223> n = A,T,C or G

<400> 45
ggcttagtag ttgccattgc gagtgcttgc tcaacgagcg ttgaacatgg cggattgtct 60
agattcaacg gatttgagtt ttaccagcaa agcgaaccaa gcgcggccca gagaattatg 120
ggttggttgg ctttgaaaag atggaaatcc tgtaggccta gtcagaaaag ccttcttgca 180
gaacagttgg ttctcgggcg aacgctcatc aagatgccca ttggaaaggc tagcgtgtat 240
ttgggagagc ctgatagcgt gtcttctgat gatgtttgtg cttggacagt gacaaaagat 300
atgcaaagca agtccgaact agacgtcaag cttcgtgagc aaattattgt agactcctac 360
ttatactgtg aggaatgata gccaagggtg gggactttaa gactaaggtg gtttgtactt 420
gcgccgatga tcccaggcag aaagamctga tcgctagttt tatacgggca actactaagc 480
cgaattccag cacactggcg gccgttacta attggatccg anctcggtac cagcttgatg 540
catascttga gttwtctata ntgtcnc 567

<210> 46
<211> 908
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 21, 23, 24, 27, 29, 34
<223> n = A,T,C or G

<400> 46
gagcgaaaga ccgagggcag ngnntangng cgangaagcg gagagggcca aaaagcaacc 60
gctttccccg gggggtgccg attcattaag gcaggtggag gacaggtttc ccgatggaag 120
gcggcagggg cgcaagcaat taatgtgagt aggccattca ttagcacccg ggcttaacat 180
ttaagcttcg ggttggtatg tggtgggaat tgtgagcgga taacaatttc acacaggaaa 240
cagctatgac catgattacg ccaagctatt taggtgacat tatagaataa ctcaagttat 300
gcatcaagct tggtaccgag ttcggatcca ctagtaacgg ccgccagtgt gtggaattcg 360
gcttagtagt tgccgaccat ggagtgctac ctaggctaga atacctgagy tcctccctag 420
cctcactcac attaaattgt atcttttcta cattagatgt cctcagcgcc ttatttctgc 480
tggacwatcg ataaattaat cctgatagga tgatagcagc agattaatta ctgagagtat 540

gttaatgtgt catccctcct atataacgta tttgcatttt aatggagcaa ttctggagat 600
aatccctgaa ggcaaaggaa tgaatcttga gggtgagaaa gccagaatca gtgtccagct 660
gcagttgtgg gagaaggtga tattatgtat gtctcagaag tgacaccata tgggcaacta 720
ctaagcccga attccagcac actggcgggc gttactaatg gatccgagct cggtaccaag 780
cttgatgcat agcttgagta tctatagtgt cactaaatag cctggcgtta tcatggtcat 840
agctgtttcc tgtgtgaaat tgttatccgc tcccaattcc ccccaccata cgagccggaa 900
cataaagt 908

<210> 47
<211> 480
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 408, 461
<223> n = A,T,C or G

<400> 47
tgccaacaag gaaagtttta aatttcccct tgaggattct tggtgatcat caaattcagt 60
ggtttttaag gttgttttct gtcaaataac tctaacttta agccaaacag tatatggaag 120
cacagataka atattacaca gataaaagag gagttgatct aaagtaraga tagttggggg 180
ctttaatttc tggaacctag gtctccccat cttcttctgt gctgaggaac ttcttggaag 240
cggggattct aaagttcttt ggaagacagt ttgaaaacca ccatgttgtt ctcagtacct 300
ttatttttaa aaagtaggtg aacattttga gagagaaaag ggcttggttg agatgaagtc 360
ccccccccccc ctttttttttt ttttagctga aatagatacc ctatgttnaa rgaarggatt 420
attatttacc atgccaytar scacatgctc tttgatgggc nyctccstac cctccttaag 480

<210> 48
<211> 591
<212> DNA
<213> Homo sapiens

<400> 48
aagagggtac cgagtggaat ttccgcttca ctagtctggt gtggctagtc ggtttcgtgg 60
tggccaacat tacgaacttc caactcaacc gttcttggac gttcaagcgg gagtaccggc 120
gaggatggtg gcgtgaattc tggcctttct ttgccgtggg atcggtagcc gccatcatcg 180
gtatgtttat caagatcttc tttactaacc cgacctctcc gatttacctg cccgagccgt 240
ggtttaacga ggggaggggg atccagtcac gcgagtactg gtcccagatc ttcgccatcg 300
tcgtgacaat gcctatcaac ttcgtcgtca ataagttgtg gaccttccga acggtgaagc 360
actccgaaaa cgtccggtgg ctgctgtgcg gtgactccca aaatcttgat aacaacaagg 420
taaccgaatc gcgctaagga accccggcat ctcgggtact ctgcatatgc gtacccctta 480
agccgaattc cagcacactg gcggccgtta ctaattggat ccgaactccg taaccaagcc 540
tgatgcgtaa cttgagttat tctatagtgt ccctaaaata acctggcgtt a 591

<210> 49
<211> 454
<212> DNA
<213> Homo sapiens

<400> 49
aagagggtac ctgccttgaa atttaaatgt ctaaggaaar tgggagatga ttaagagttg 60
gtgtggcyta gtcacaccaa aatgtattta ttacatcctg ctcctttcta gttgacagga 120

aagaaagctg ctgtggggaa aggagggata aatactgaag ggatttacta aacaaatgtc 180
catcacagag ttttcctttt tttttttttg agacagagtc ttgctctgtc acccaggctg 240
gaatgaagwg gtatgatctc agttgaatgc aacctctacc tcctaggttc aagcgattct 300
catgcctcag cctcctgagc agctgggact ataggcgcat gctaccatgc caggctaatt 360
tttatatttt tattagagac ggggtgttgc catgttggcc aggcaggtct cgaactcctg 420
ggcctcagat gatctgcccc accgtaccct ctta 454

<210> 50
<211> 463
<212> DNA
<213> Homo sapiens

<400> 50
aagagggtac caaaaaaaag aaaaaggaaa aaaagaaaaa caacttgtat aaggctttct 60
gctgcataca gctttttttt tttaaataaa tggtgccaac aaatgttttt gcattcacac 120
caattgctgg ttttgaaatc gtactcttca aaggtatttg tgcagatcaa tccaatagtg 180
atgccccgta ggttttgtgg actgcccacg ttgtctacct tctcatgtag gagccattga 240
gagactgttt ggacatgcct gtgttcatgt agccgtgatg tccgggggcc gtgtacatca 300
tgttaccgtg gggtggggtc tgcattggct gctgggcata tggctgggtg cccatcatgc 360
ccatctgcat ctgcataggg tattggggcg tttgatccat atagccatga ttgctgtggt 420
agccactgtt catcattggc tgggacatgc tgttaccctc tta 463

<210> 51
<211> 399
<212> DNA
<213> Homo sapiens

<400> 51
cttcaacctc ccaaagtgct gggattacag gactgagcca ccacgctcag cctaagcctc 60
tttttcacta ccctctaagc gatctaccac agtgatgagg ggctaaagag cagtgcaatt 120
tgattacaat aatggaactt agatttatta attaacaatt tttccttagc atgttggttc 180
cataattatt aagagtatgg acttacttag aaatgagctt tcattttaag aatttcatct 240
ttgaccttct ctattagtct gagcagtatg acactatacg tattttattt aactaaccta 300
ccttgagcta ttacttttta aaaggctata tacatgaatg tgtattgtca actgtaaagc 360
cccacagtat ttaattatat catgatgtct ttgaggttg 399

<210> 52
<211> 392
<212> DNA
<213> Homo sapiens

<400> 52
cttcaacctc aatcaacctt ggtaattgat aaaatcatca cttaactttc tgatataatg 60
gcaataatta tctgagaaaa aaaagtggtg aaagattaaa cttgcatttc tctcagaatc 120
ttgaaggata tttgaataat tcaaaagcgg aatcagtagt atcagccgaa gaaactcact 180
tagctagaac gttggaccca tggatctaag tccctgccct tccactaacc agctgattgg 240
ttttgtgtaa acctcctaca cgcttgggct tggtcgcctc atttgtcaaa gtaaaggctg 300
aaataggaag ataatgaacc gtgtcttttt ggtctctttt ccatccatta ctctgatttt 360
acaaagaggc ctgtattccc ctggtgaggt tg 392

<210> 53
<211> 179
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 135, 143, 179
<223> n = A,T,C or G

<400> 53
ttcgggtgat gcctcctcag gctacagtga agactggatt acagaaaggt gccagcgaga 60
tttcagattc ctgtaaacct ctaaagaaaa ggagtcgcgc ctcaactgat gtagaaatga 120
ctagttcagc atacngagac acntctgact ccgattctag aggactgagt gacctgcan 179

<210> 54
<211> 112
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 49, 54, 55, 75, 91, 107
<223> n = A,T,C or G

<400> 54
ttcgggtgat gcctcctcag gctacatcat natagaagca aagtagaana atcnngtttg 60
tgcattttcc cacanacaaa attcaaatga ntggaagaaa ttggganagt at 112

<210> 55
<211> 225
<212> DNA
<213> Homo sapiens

<400> 55
tgagcttccg cttctgacaa ctcaatagat aatcaaagga caactttaac agggattcac 60
aaaggagtat atccaaatgc caataaacat ataaaaagga attcagcttc atcatcatca 120
gaagwatgca aattaaaacc ataatgagaa accactatgt cccactagaa tagataaaat 180
cttaaaagac tggtaaaacc aagtgttggt aaggcaagag gagca 225

<210> 56
<211> 175
<212> DNA
<213> Homo sapiens

<400> 56
gctcctcttg ccttaccaac acattctcaa aaacctgtta gagtcctaag cattctcctg 60
ttagtattgg gattttaccc ctgtcctata aagatgttat gtaccaaaaa tgaagtggag 120
ggccataccc tgagggaggg gagggatctc tagtgttgtc agaagcggaa gctca 175

<210> 57
<211> 223
<212> DNA
<213> Homo sapiens

<400> 57
agccatttac cacccatgga tgaatggatt ttgtaattct agctgttgta ttttgtgaat 60
ttgttaattt tgttgttttt ctgtgaaaca catacattgg atatgggagg taaaggagtg 120

tcccagttgc tcctggtcac tccctttata gccattactg tcttgtttct tgtaactcag 180
gttaggtttt ggtctctctt gctccactgc aaaaaaaaaa aaa 223

<210> 58
<211> 211
<212> DNA
<213> Homo sapiens

<400> 58
gttcgaaggt gaacgtgtag gtagcggatc tcacaactgg ggaactgtca aagacgaatt 60
aactgacttg gatcaatcaa atgtgactga ggaaacacct gaaggtgaag aacatcatcc 120
agtggcagac actgaaaata aggagaatga agttgaagag gtaaaagagg agggtccaaa 180
agagatgact ttggatgggt ggtaaatggc t 211

<210> 59
<211> 208
<212> DNA
<213> Homo sapiens

<400> 59
gctcctcttg ccttaccaac tttgcaccca tcatcaacca tgtggccagg tttgcagccc 60
aggctgcaca tcaggggact gcctcgcaat acttcatgct gttgctgctg actgatggtg 120
ctgtgacgga tgtggaagcc acacgtgagg ctgtggtgcg tgcctcgaac ctgcccatgt 180
cagtgatcat tatgggtggt aaatggct 208

<210> 60
<211> 171
<212> DNA
<213> Homo sapiens

<400> 60
agccatttac cacccatact aaattctagt tcaaactcca acttcttcca taaaacatct 60
aaccactgac accagttggc aatagcttct tccttcttta acctcttaga gtatttatgg 120
tcaatgccac acatttctgc aactgaataa agttggtaag gcaagaggag c 171

<210> 61
<211> 134
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 70, 80, 86, 88, 97, 117, 123, 131
<223> n = A,T,C or G

<400> 61
cgggtgatgc ctcctcaggc tttggtgtgt ccactcnact cactggcctc ttctccagca 60
actggtgaan atgtcctcan gaaaancncc acacgcngct cagggtgggg tgggaancat 120
canaatcatc nggc 134

<210> 62
<211> 145
<212> DNA
<213> Homo sapiens

<400> 62
agagggtaca tatgcaacag tatataaagg aagaagtgca ctgagaggaa cttcatcaag 60
gccatttaat caataagtga tagagtcaag gctcaaccca ggtgtgacgg attccaggtc 120
ccaagctcct tactggtacc ctctt 145

<210> 63
<211> 297
<212> DNA
<213> Homo sapiens

<400> 63
tgcactgaga ggaattcaaa gggtttatgc caaagaacaa accagtcctc tgcagcctaa 60
ctcatttgtt tttgggctgc gaagccatgt agagggcgat caggcagtag atggtccctc 120
ccacagtcag cgccatggtg gtccggtaaa gcatttggtc aggcaggcct cgtttcaggt 180
agacgggcac acatcagctt tctggaaaaa cttttgtagc tctggagctt tgtttttccc 240
agcataatca tacactgtgg aatcggaggt cagtttagtt ggtaaggcaa gaggagc 297

<210> 64
<211> 300
<212> DNA
<213> Homo sapiens

<400> 64
gcactgagag gaacttccaa tactatgttg aataggagtg gtgagagagg gcatccttgt 60
cttgtgccgg ttttcaaagg gaatgcttcc agcttttgcc cattcagtat aatattaaag 120
aatgttttac cattttctgt cttgcctgtt tttctgtgtt tttgttggtc tcttcattct 180
ccatttttag gcctttacat gttaggaata tatttctttt aatgatactt caccttttggt 240
atcttttgtg agactctact catagtgtga taagcactgg gttggtaagg caagaggagc 300

<210> 65
<211> 203
<212> DNA
<213> Homo sapiens

<400> 65
gctcctcttg ccttaccaac tcacccagta tgtcagcaat tttatcrgct ttacctacga 60
aacagcctgt atccaaacac ttaacacact cacctgaaaa gttcaggcaa caatcgcctt 120
ctcatgggtc tctctgctcc agttctgaac ctttctcttt tcctagaaca tgcatttarg 180
tcgatagaag ttcctctcag tgc 203

<210> 66
<211> 344
<212> DNA
<213> Homo sapiens

<400> 66
tacggggacc cctgcattga gaaagcgaga ctcactctga agctgaaatg ctgttgccct 60
tgcagtgctg gtagcaggag ttctgtgctt tgtgggctaa ggctcctgga tgacccctga 120
catggagaag gcagagttgt gtgccccttc tcatggcctc gtcaaggcat catggactgc 180
cacacacaaa atgccgtttt tattaacgac atgaaattga aggagagaac acaattcact 240
gatgtggctc gtaaccatgg atatggtcac atacagaggt gtgattatgt aaaggttaat 300
tccacccacc tcatgtggaa actagcctca atgcaggggt ccca 344

<210> 67
<211> 157
<212> DNA
<213> Homo sapiens

<400> 67
gcactgagag gaacttcgta gggaggttga actggctgct gaggaggggg aacaacaggg 60
taaccagact gatagccatt ggatggataa tatggtggtt gaggagggac actacttata 120
gcagagggtt gtgtatagcc tgaggaggca tcacccg 157

<210> 68
<211> 137
<212> DNA
<213> Homo sapiens

<400> 68
gcactgagag gaacttctag aaagtgaaag tctagacata aaataaaata aaaatttaaa 60
actcaggaga gacagcccag cacggtggct cacgcctgta atcccagaac tttgggagcc 120
tgaggaggca tcacccg 137

<210> 69
<211> 137
<212> DNA
<213> Homo sapiens

<400> 69
cgggtgatgc ctcctcaggc tgtattttga agactatcga ctggacttct tatcaactga 60
agaatccgtt aaaaatacca gttgtattat ttctacctgt caaaatccat ttcaaatgtt 120
gaagttcctc tcagtgc 137

<210> 70
<211> 220
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 89, 112, 129, 171, 172
<223> n = A,T,C or G

<400> 70
agcatgttga gcccagacac gcaatctgaa tgagtgtgca cctcaagtaa atgtctacac 60
gctgcctggt ctgacatggc acaccatcnc gtggagggca casctctgct cngcctacwa 120
cgagggcant ctcatwgaca ggttccaccc accaaactgc aagaggctca nnaagtactr 180
ccagggtmya sggacmasgg tgggaytyca ycacwcatct 220

<210> 71
<211> 353
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 66, 160, 204, 246, 267, 334, 339, 342
<223> n = A,T,C or G

<400> 71
cgttagggtc tctatccact gctaaaccat acacctgggt aaacagggac catttaacat 60
tcccanctaa atatgccaag tgacttcaca tgtttatctt aaagatgtcc aaaacgcaac 120
tgattttctc ccctaaacct gtgatggtgg gatgattaan cctgagtggt ctacagcaag 180
ttaagtgcaa ggtgctaaat gaangtgacc tgagatacag catctacaag gcagtacctc 240
tcaacncagg gcaactttgc ttctcanagg gcatttagca gtgtctgaag taatttctgt 300
attacaactc acggggcggg gggtgaatat ctantggana gnagacccta acg 353

<210> 72
<211> 343
<212> DNA
<213> Homo sapiens

<400> 72
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aaaatgttyg caatctctcc atctgacaaa aggctaatat ccagawtcta awaggaactt 120
aaacaaattt atgagaaaag aacaracaac ctcawcaaaa agtgggtgaa ggawatgcts 180
aaargaagac atytattcag ccagtaaaca yatgaaaaaa aggctcatsa tcactgawca 240
ttagagaaat gcaaatcaaa accacaatga gataccatct yayrccagtt agaayggtga 300
tcattaaaar stcaggaaac aacagatgct ggacaaggtg tca 343

<210> 73
<211> 321
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 288
<223> n = A,T,C or G

<400> 73
gcactgagag gaacttcaga gagagagaga gagttccacc ctgtacttgg ggagagaaac 60
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tcaaagttcc catgctgcca aagtgccatc ctttggggta ctgttttctg agctccagtg 180
ataactcatt tatacaaggg agatacccag aaaaaaagtg agcaaatctt aaaaaggtgg 240
cttgagttca gccttaaata ccatcttgaa atgacacaga gaaagaanga tgttgggtgg 300
gagtggatag agaccctaac g 321

<210> 74
<211> 321
<212> DNA
<213> Homo sapiens

<400> 74
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agaaggtgag aaagtctttg gttctgaagc agcttctaag atcttttcat ttgcttcatt 120
tcaaagttcc catgctgcca aagtgccatc ctttggggta ctgttttctg agctccagtg 180
ataactcatt tatacaaggg agatacccag aaaaaaagtg agcaaatctt aaaaaggtgg 240
cttgagttca gycttaaata ccatcttgaa atgamacaga gaaagaagga tgttgggtgg 300
gagtggatag agaccctaac g 321

<210> 75
<211> 317
<212> DNA
<213> Homo sapiens

<400> 75
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aactcagttt ctcagttcca atcctgattc aggtgtttac cagctacaca accttaagca 120
agtcagataa ccttagcttc ctcatatgca aaatgagaat gaaaagtact catcgctgaa 180
ttgttttgag gattagaaaa acatctggca tgcagtagaa attcaattag tattcatttt 240
cattcttcta aattaaacaa ataggatttt tagtggtgga acttcagaca ccagaaatgg 300
gagtggatag agaccct 317

<210> 76
<211> 244
<212> DNA
<213> Homo sapiens

<400> 76
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catactttaa gttctgggat acacgtgcag catgcgcagg tttgttgcat aggtatacac 120
ttgccatggt ggtttgctgc acccatcagt ccatcatcta cattaggtat ttctcctaat 180
gctatccctc ccctagcccc ttacaccccc aacaggctct agtgtgtgaa gttcctctca 240
gtgc 244

<210> 77
<211> 254
<212> DNA
<213> Homo sapiens

<400> 77
cgttagggtc tctatccact gaaatctgaa gcacaggagg aagagaagca gtyctagtga 60
gatggcaagt tcwtttacca cactctttaa catttygttt agttttaacc tttatttatg 120
gataataaag gttaatatta ataatgattt attttaaggc attcccraat ttgcataatt 180
ctccttttgg agataccctt ttatctccag tgcaagtctg gatcaaagtg atasamagaa 240
gttcctctca gtgc 254

<210> 78
<211> 355
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 69, 87, 186, 192, 220, 227, 251, 278, 339, 346, 350
<223> n = A,T,C or G

<400> 78
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ccggatggnc acgaagacgc actggancac gtgcttacgt ccttttgctc tgttgatggc 120
cctgagggga cgcaggaccc ttatgaccct cagaatcttc acaacgggag atggcactgg 180
attgantccc antgacacca gagacacccc aaccaccagn atatcantat attgatgtag 240
ttcctgtaga nggccccctt gtggaggaaa gctccatnag ttggtcatct tcaacaggat 300

ctcaacagtt tccgatggct gtgatgggca tagtcatant taaccntgtn tcgaa 355

<210> 79
<211> 406
<212> DNA
<213> Homo sapiens

<400> 79
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ctgctatttg aagtgtaatt gagaaggaaa attttagcgt gctcactgac ctgcctgtag 120
ccccagtgac agctaggatg tgcattctcc agccatcaag agactgagtc aagttgttcc 180
ttaagtcaga acagcagact cagctctgac attctgattc gaatgacact gttcaggaat 240
cggaatcctg tcgattagac tggacagctt gtggcaagtg aatttgcctg taacaagcca 300
gattttttaa aatttatatt gtaaataatg tgtgtgtgtg tgtgtgtata tatatatata 360
tgtacagtta tctaagttaa tttaaaagtt gtttggtacc ctctta 406

<210> 80
<211> 327
<212> DNA
<213> Homo sapiens

<400> 80
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agggctagga tgatgattaa taagagggat gacataacta ttagtggcag gttagttgtt 120
tgtagggctc atggtagggg taaaaggagg gcaatttcta gatcaaataa taagaaggta 180
atagctacta agaagaattt tatggagaaa gggacgcggg cgggggatat agggtcgaag 240
ccgcactcgt aaggggtgga tttttctatg tagccgttga gttgtggtag tcaaaatgta 300
ataattatta gtagtaagcc taggaga 327

<210> 81
<211> 318
<212> DNA
<213> Homo sapiens

<400> 81
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attgcattca taatttatta tgcatttatg cttgtatctc ctaagtcatg gtatataatc 120
catgcttttt atgttttgtc tgacataaac tcttatcaga gccctttgca cacagggatt 180
caataaatat taacacagtc tacatttatt tggtgaatat tgcatatctg ctgtactgaa 240
agcacattaa gtaacaaagg caagtgagaa gaatgaaaag cactactcac aacagttatc 300
atgattgcgc atagacta 318

<210> 82
<211> 338
<212> DNA
<213> Homo sapiens

<400> 82
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cgccttaccc cccactatta acctactggg agaactctct gtgctagtaa ccacgttctc 120
ctgatcaaat atcactctcc tacttacagg actcaacata ctagtcacag ccctatactc 180
cctctacata tttaccacaa cacaatgggg ctcactcacc caccacatta acaacataaa 240
accctcattc acacgagaaa acaccctcat gttcatacac ctatccccca ttctcctcct 300
atccctcaac cccgacatca ttaccgggtt ttcctctt 338

<210> 83
<211> 111
<212> DNA
<213> Homo sapiens

<400> 83
agccatttac cacccatcca caaaaaaaaa aaaaaaaaag aaaaatatca aggaataaaa 60
atagactttg aacaaaaagg aacatttgct ggcctgagga ggcatcaccc g 111

<210> 84
<211> 224
<212> DNA
<213> Homo sapiens

<400> 84
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aaggaagaaa ggagaaaaaa gggcatcatc cccgttccga agggtcaggg aggaggaaat 120
tgaggtggat tcacgagttg cggacaactc ctttgatgcc aagcgaggtg cagccggaga 180
ctggggagag cgagccaatc aggttttgaa gttcctctca gtgc 224

<210> 85
<211> 348
<212> DNA
<213> Homo sapiens

<400> 85
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ctcagtaact tccttgtgtt gtgtgtattc aactcacasa gttgaacgat cctttacaca 120
gagcagactt gtaacactct twttgtggaa tttgcaagtg gagatttcag scgctttgaa 180
gtsaaaggta gaaaaggaaa tatcttccta taaaaactag acagaatgat tctcagaaac 240
tcctttgtga tgtgtgcgtt caactcacag agtttaacct ttcwtttcat agaagcagtt 300
aggaaacact ctgtttgtaa agtctgcaag tggatagaga ccctaacg 348

<210> 86
<211> 293
<212> DNA
<213> Homo sapiens

<400> 86
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acabagwkca ggcttkcaaa cactcttttt gtmgaatytg caagwggaka tttsrrccrc 120
tttgwggycw wysktmgaaw mggrwatatc ttcwyatmra amctagacag aaksattctc 180
akaawstyyy ytgtgawgws tgcrttcaac tcacagagkt kaacmwtyct kytsatrgag 240
cagttwkgaa actctmtttc tttggattct gcaagtggat agagacccta acg 293

<210> 87
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 87
ctcctaggct 10

<210> 88
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 88
agtagttgcc 10

<210> 89
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 89
ttccgttatg c 11

<210> 90
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 90
tggtaaaggg 10

<210> 91
<211> 10
<212> DNA
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<220>
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<400> 91
tcggtcatag 10

<210> 92
<211> 10

<212> DNA
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<220>
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tumor cDNA

<400> 92
tacaacgagg 10

<210> 93
<211> 10
<212> DNA
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<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 93
tggattggtc 10

<210> 94
<211> 10
<212> DNA
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<220>
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tumor cDNA

<400> 94
ctttctaccc 10

<210> 95
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 95
ttttggctcc 10

<210> 96
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 96
ggaaccaatc 10

<210> 97
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 97
tcgatacagg 10

<210> 98
<211> 10
<212> DNA
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<220>
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<400> 98
ggtactaagg 10

<210> 99
<211> 10
<212> DNA
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<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 99
agtctatgcg 10

<210> 100
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
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<400> 100
ctatccatgg 10

<210> 101
<211> 10

<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 101
tctgtccaca 10

<210> 102
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
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tumor cDNA

<400> 102
aagagggtac 10

<210> 103
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 103
cttcaacctc 10

<210> 104
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 104
gctcctcttg ccttaccaac 20

<210> 105
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 105
gtaagtcgag cagtgtgatg 20

<210> 106
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 106
gtaagtcgag cagtctgatg 20

<210> 107
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 107
gacttagtgg aaagaatgta 20

<210> 108
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 108
gtaattccgc caaccgtagt 20

<210> 109
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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<400> 109
atggttgatc gatagtggaa 20

<210> 110
<211> 20

<212> DNA
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<220>
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tumor cDNA

<400> 110
acggggaccc ctgcattgag 20

<210> 111
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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tumor cDNA

<400> 111
tattctagac cattcgctac 20

<210> 112
<211> 20
<212> DNA
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<220>
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tumor cDNA

<400> 112
acataaccac tttagcgttc 20

<210> 113
<211> 20
<212> DNA
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<220>
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tumor cDNA

<400> 113
cgggtgatgc ctcctcaggc 20

<210> 114
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
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tumor cDNA

<400> 114
agcatgttga gcccagacac 20

<210> 115
<211> 20
<212> DNA
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<220>
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<400> 115
gacaccttgt ccagcatctg 20

<210> 116
<211> 20
<212> DNA
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<220>
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<400> 116
tacgctgcaa cactgtggag 20

<210> 117
<211> 20
<212> DNA
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<220>
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<400> 117
cgttagggtc tctatccact 20

<210> 118
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 118
agactgactc atgtccccta 20

<210> 119
<211> 20

<212> DNA
<213> Artificial Sequence

<220>
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tumor cDNA

<400> 119
tcatcgctcg gtgactcaag 20

<210> 120
<211> 20
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<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 120
caagattcca taggctgacc 20

<210> 121
<211> 20
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<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 121
acgtactggt cttgaaggtc 20

<210> 122
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 122
gacgcttggc cacttgacac 20

<210> 123
<211> 20
<212> DNA
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<220>
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tumor cDNA

<400> 123
gtatcgacgt agtggtctcc 20

<210> 124
<211> 20
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<220>
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<400> 124
tagtgacatt acgacgctgg 20

<210> 125
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 125
cgggtgatgc ctcctcaggc 20

<210> 126
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 126
atggctattt tcgggggctg aca 23

<210> 127
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer tumor cDNA

<400> 127
ccggtatctc ctcgtgggta tt 22

<210> 128
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 128
ctgcctgagc cacaaatg 18

<210> 129
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 129
ccggaggagg aagctagagg aata 24

<210> 130
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer for amplification from breast cancer
tumor cDNA

<400> 130
ttttttttttt ttag 14

<210> 131
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited Th Motifs (B-cell epitopes)

<400> 131
Ser Ser Gly Gly Arg Thr Phe Asp Asp Phe His Arg Tyr Leu Leu Val
1 5 10 15
Gly Ile

<210> 132
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited Th Motifs (B-cell epitopes)

<221> VARIANT
<222> 13
<223> Xaa = Any Amino Acid

<400> 132
Gln Gly Ala Ala Gln Lys Pro Ile Asn Leu Ser Lys Xaa Ile Glu Val
 1   5   10   15
Val Gln Gly His Asp Glu
            20

<210> 133
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited Th Motifs (B-cell epitopes)

<400> 133
Ser Pro Gly Val Phe Leu Glu His Leu Gln Glu Ala Tyr Arg Ile Tyr
 1   5   10   15
Thr Pro Phe Asp Leu Ser Ala
            20

<210> 134
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited HLA A2.1 Motifs (T-cell epitopes)

<400> 134
Tyr Leu Leu Val Gly Ile Gln Gly Ala
 1   5

<210> 135
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited HLA A2.1 Motifs (T-cell epitopes)

<400> 135
Gly Ala Ala Gln Lys Pro Ile Asn Leu
 1   5

<210> 136
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited HLA A2.1 Motifs (T-cell epitopes)

<221> VARIANT
<222> 5
<223> Xaa = Any Amino Acid

<400> 136
Asn Leu Ser Lys Xaa Ile Glu Val Val
1 5

<210> 137
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited HLA A2.1 Motifs (T-cell epitopes)

<400> 137
Glu Val Val Gln Gly His Asp Glu Ser
1 5

<210> 138
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited HLA A2.1 Motifs (T-cell epitopes)

<400> 138
His Leu Gln Glu Ala Tyr Arg Ile Tyr
1 5

<210> 139
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited HLA A2.1 Motifs (T-cell epitopes)

<400> 139
Asn Leu Ala Phe Val Ala Gln Ala Ala

1 5

<210> 140
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Predicited HLA A2.1 Motifs (T-cell epitopes)

<400> 140
Phe Val Ala Gln Ala Ala Pro Asp Ser
1 5

<210> 141
<211> 9388
<212> DNA
<213> Homo sapiens

<400> 141
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attcttctgc cttgagatgc tgttaatctg taaccctagc cccaaccctg tgctcacaga 180
gacatgtgct gtgttgactc aaggttcaat ggatttaggg ctatgctttg ttaaaaaagt 240
gcttgaagat aatatgcttg ttaaaagtca tcaccattct ctaatctcaa gtacccaggg 300
acacaataca ctgcggaagg ccgcagggac ctctgtctag gaaagccagg tattgtccaa 360
gatttctccc catgtgatag cctgagatat ggcctcatgg gaagggtaag acctgactgt 420
cccccagccc gacatccccc agcccgacat cccccagccc gacacccgaa aagggtctgt 480
gctgaggagg attagtaaaa gaggaaggcc tctttgcagt tgaggtaaga ggaaggcatc 540
tgtctcctgc tcgtccctgg gcaatagaat gtcttggtgt aaaacccgat tgtatgttct 600
acttactgag ataggagaaa acatccttag ggctggaggt gagacacgct ggcggcaata 660
ctgctcttta atgcaccgag atgtttgtat aagtgcacat caaggcacag cacctttcct 720
taaacttatt tatgacacag agacctttgt tcacgttttc ctgctgaccc tctccccact 780
attaccctat tggcctgcca catccccctc tccgagatgg tagagataat gatcaataaa 840
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cttgggctca cttttctttc tctatacttt gtctctgtgt ctctttcttt tctcagtctc 960
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ccgggtggca ggcatgggcc aggtgggagg gtctccagcg cctggtgcaa atctccaaga 1140
aagtgcagga aacagcacca agggtgattg taaattttga tttggcgcgg caggtagcca 1200
ttccagcgca aaaatgcgca ggaaagcttt tgctgtgctt gtaggcaggt aggccccaag 1260
cacttcttat tggctaatgt ggagggaacc tgcacatcca ttggctgaaa tctccgtcta 1320
tttgaggctg actgagcgcg ttcctttctt ctgtgttgcc tggaaacgga ctgtctgcct 1380
agtaacatct gatcacgttt cccattggcc gccgtttccg gaagcccgcc ctcccatttc 1440
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gtcctcagtc ttgggctatt cggccacgtg cctgccggac atgggacgct ggagggtcag 1560
cagcgtggag tcctggcctt ttgcgtccac gggtgggaaa ttggccattg ccacggcggg 1620
aactgggact caggctgccc cccggccgtt tctcatccgt ccaccggact cgtgggcgct 1680
cgcactggcg ctgatgtagt ttcctgacct ctgacccgta ttgtctccag attaaaggta 1740
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<211> 419
<212> DNA
<213> Homo sapiens

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<210> 143
<211> 402
<212> DNA
<213> Homo sapiens

<400> 143
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<210> 144
<211> 224
<212> DNA
<213> Homo sapiens

<400> 144

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<210> 145
<211> 111
<212> DNA
<213> Homo sapiens

<400> 145
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atagactttg aacaaaaagg aacatttgct ggcctgagga ggcatcaccc g 111

<210> 146
<211> 585
<212> DNA
<213> Homo sapiens

<400> 146
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<210> 147
<211> 579
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 383, 453, 465, 501
<223> n = A,T,C or G

<400> 147
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<210> 148

<211> 249
<212> DNA
<213> Homo sapiens

<400> 148
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cccataagag ttacatactc attaatctcc gtctctatcc ccaggtctca gatgctggac 240
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<210> 149
<211> 255
<212> DNA
<213> Homo sapiens

<400> 149
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<210> 150
<211> 318
<212> DNA
<213> Homo sapiens

<400> 150
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cacagtgttg cagcgtaa 318

<210> 151
<211> 323
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 7, 10, 13, 14, 23, 26, 32, 44, 54, 56, 67, 74, 75, 81,
87, 104, 105, 109, 111, 120, 123, 124, 136, 137, 138, 151,
155, 162, 168, 171, 176, 184, 186, 196, 215, 231, 239, 252,
265, 288, 318
<223> n = A,T,C or G

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ctccacattg ttgcagcnat aat 323

<210> 152
<211> 311
<212> DNA
<213> Homo sapiens

<400> 152
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<210> 153
<211> 332
<212> DNA
<213> Homo sapiens

<400> 153
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<210> 154
<211> 345
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 154, 224, 297, 330
<223> n = A,T,C or G

<400> 154
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<210> 155
<211> 295
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 46, 199, 252, 266
<223> n = A,T,C or G

<400> 155
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<210> 156
<211> 406
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 172, 178, 332, 338, 342, 381, 400, 402
<223> n = A,T,C or G

<400> 156
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cctcgaagcc caggcagagg accagccatc ccagcctgca ggtaaagtgt gtcacctgtc 120
aggtgggctt ggggtgagtg ggtgggggaa gtgtgtgtgc aaaggggtg tnaatgtnta 180
tgcgtgtgag catgagtgat ggctagtgtg actgcatgtc agggagtgtg aacaagcgtg 240
cgggggtgtg tgtgcaagtg cgtatgcata tgagaatatg tgtctgtgga tgagtgcatt 300
tgaaagtctg tgtgtgtgcg tgtggtcatg anggtaantt antgactgcg caggatgtgt 360
gagtgtgcat ggaacactca ntgtgtgtgt caagtggccn ancgtc 406

<210> 157
<211> 208
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 115, 119, 182, 187
<223> n = A,T,C or G

<400> 157
tgacgcttgg ccacttgaca cactaaaggg tgttactcat cactttcttc tctcctcggt 60
ggcatgtgag tgcatctatt cacttggcac tcatttgttt ggcagtgact gtaanccana 120
tctgatgcat acaccagctt gtaaattgaa taaatgtctc taatactatg tgctcacaat 180
anggtanggg tgaggagaag gggagaga 208

<210> 158
<211> 547
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 235
<223> n = A,T,C or G

<400> 158
cttcaacctc cttcaacctc cttcaacctc ctggattcaa acaatcatcc cacctcagac 60
tccttagtag ctgagactac agactcacgc cactacatct ggctaaattt ttgtagagat 120
agggtttcat catgttgccc tggctggtct caaactcctg acctcaagca atgtgcccac 180
ctcagcctcc caaagtgctg ggattacagg cataagccac catgcccagt ccatntttaa 240
tctttcctac cacattctta ccacactttc ttttatgttt agatacataa atgcttacca 300
ttatgataca attgcccaca gtattaagac agtaacatgc tgcacaggtt tgtagcctag 360
gaacagtagg caataccaca tagcttaggt gtgtggtaga ctataccatc taggtttgtg 420
taagttacac tttatgctgt ttacacaatg acaaaaccat ctaatgatgc atttctcaga 480
atgtatcctt gtcagtaagc tatgatgtac agggaacact gcccaaggac acagatattg 540
tacctgt 547

<210> 159
<211> 203
<212> DNA
<213> Homo sapiens

<400> 159
gctcctcttg ccttaccaac tcacccagta tgtcagcaat tttatcrgct ttacctacga 60
aacagcctgt atccaaacac ttaacacact cacctgaaaa gttcaggcaa caatcgcctt 120
ctcatgggtc tctctgctcc agttctgaac ctttctcttt tcctagaaca tgcatttarg 180
tcgatagaag ttcctctcag tgc 203

<210> 160
<211> 402
<212> DNA
<213> Homo sapiens

<400> 160
tgtaagtcga gcagtgtgat gggtggaaca gggttgtaag cagtaattgc aaactgtatt 60
taaacaataa taataatatt tagcatttat agagcacttt atatcttcaa agtacttgca 120
aacattayct aattaaatac cctctctgat tataatctgg atacaaatgc acttaaactc 180
aggacagggt catgagaraa gtatgcattt gaaagttggt gctagctatg ctttaaaaac 240
ctatacaatg atgggraagt tagagttcag attctgttgg actgtttttg tgcatttcag 300
ttcagcctga tggcagaatt agatcatatc tgcactcgat gactytgctt gataacttat 360
cactgaaatc tgagtgttga tcatcacact gctcgactta ca 402

<210> 161
<211> 193
<212> DNA
<213> Homo sapiens

<400> 161
agcatgttga gcccagacac tgaccaggag aaaaaccaac caatagaaac acgcccagac 60
actgaccagg agaaaaacca accaataaaa acaggcccgg acataagaca aataataaaa 120
ttagcggaca aggacatgaa aacagctatt gtaagagcgg atatagtggt gtgtgtctgg 180
gctcaacatg cta 193

<210> 162
<211> 147
<212> DNA
<213> Homo sapiens

<400> 162
tgttgagccc agacactgac caggagaaaa accaaccaat aaaaacaggc ccggacataa 60
gacaaataat aaaattagcg gacaaggaca tgaaaacagc tattgtaaga gcggatatag 120
tggtgtgtgt ctgggctcaa catgcta 147

<210> 163
<211> 294
<212> DNA
<213> Homo sapiens

<400> 163
tagcatgttg agcccagaca caaatctttc cttaagcaat aaatcatttc tgcatatgtt 60
tttaaaacca cagctaagcc atgattattc aaaaggacta ttgtattggg tattttgatt 120
tgggttctta tctccctcac attatcttca tttctatcat tgacctctta tcccagagac 180
tctcaaactt ttatgttata caaatcacat tctgtctcaa aaaatatctc acccacttct 240
cttctgtttc tgcgtgtgta tgtgtgtgtg tgtgtgtctg ggctcaacat gcta 294

<210> 164
<211> 412
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 292
<223> n = A,T,C or G

<400> 164
cgggattggc tttgagctgc agatgctgcc tgtgaccgca cccggcgtgg aacagaaagc 60
cacctggctg caagtgcgcc agagccgccc tgactacgtg ctgctgtggg gctggggcgt 120
gatgaactcc accgccctga aggaagccca ggccaccgga tacccccgcg acaagatgta 180
cggcgtgtgg tgggccggtg cggagcccga tgtgcgtgac gtgggcgaag gcgccaaggg 240
ctacaacgcg ctggctctga acggctacgg cacgcagtcc aaggtgatcc angacatcct 300
gaaacacgtg cacgacaagg gccagggcac ggggcccaaa gacgaagtgg gctcggtgct 360
gtacacccgc ggcgtgatca tccagatgct ggacaaggtg tcaatcacta at 412

<210> 165
<211> 361
<212> DNA
<213> Homo sapiens

<400> 165
ttgacacctt gtccagcatc tgcatctgat gagagcctca gatggctacc actaatggca 60
gaaggcaaag gagaacaggc attgtatggc aagaaaggaa gaaagagaga ggggagaaag 120
gtgctaggtt cttttcaaca accagttctt gatggaactg agagtaagag ctcaaggcca 180
ggtgtggtga ctccaaccag taatcccaac attttaggag gctgaggcag gcagatgtct 240
tgaccccatg agtttgtgac cagcctgaac aacatcatga gactccatct ctacaataat 300
tacaaaaatt aatcaggcat tgtggtatgc cctgtagtcc cagatgctgg acaaggtgtc 360
a 361

<210> 166
<211> 427
<212> DNA
<213> Homo sapiens

<400> 166
twgactgact catgtcccct acacccaact atcttctcca ggtggccagg catgatagaa 60
tctgatcctg acttagggga tatattttctt tttacttccc atcttgattc cctgccggtg 120
agtttcctgg ttcagggtaa gaaaggagct caggccaaag taatgaacaa atccatcctc 180
acagacgtac agaataagag aacwtggacw tagccagcag aacmcaaktg aaamcagaac 240
mcttamctag gatracaamc mcrraratar ktgcycmcmc wtataataga aaccaaactt 300
gtatctaatt aaatatttat ccacygtcag ggcattagtg gttttgataa atacgctttg 360
gctaggattc ctgaggttag aatggaaraa caattgcamc gagggtaggg gacatgagtc 420
aktctaa 427

<210> 167
<211> 500
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 288, 303, 318, 326
<223> n = A,T,C or G

<400> 167
aacgtcgcat gctcccggcc gccatggccg cgggatagac tgactcatgt cccctaagat 60
agaggagaca cctgctaggt gtaaggagaa gatggttagg tctacggagg ctccagggtg 120
ggagtagttc cctgctaagg gagggtagac tgttcaacct gttcctgctc cggcctccac 180
tatagcagat gcgagcagga gtaggagaga gggaggtaag agtcagaagc ttatgttgtt 240
tatgcgggga aacgccrtat cgggggcagc cragttatta ggggacantr tagwyartcw 300
agntagcatc caaagcgngg gagttntccc atatggttgg acctgcaggc ggccgcatta 360
gtgattagca tgtgagcccc agacacgcat agcaacaagg acctaaactc agatcctgtg 420
ctgattactt aacatgaatt attgtattta tttaacaact ttgagttatg aggcatatta 480
ttaggtccat attacctgga 500

<210> 168
<211> 358
<212> DNA
<213> Homo sapiens

<400> 168
ttcatcgctc ggtgactcaa gcctgtaatc ccagaacttt gggaggccga ggggagcaga 60
tcacctgagg ttgggagttt gagaccagcc tggccaacat ggtgacaacc cgtctctgct 120
aaaaatacaa aaattagcca agcatggtgg catgcacttg taatcccagc tactcgggag 180
gctgaggcag gagaatcact tgaggccagg aggcagaggt tgcagtgagg cagaggttga 240
gatcatgcca ctgcactcca gcctgggcaa cagagtaaga ctccatctca aaaaaaaaaa 300
aaaaaaagaa tgatcagagc cacaaataca gaaaaccttg agtcaccgag cgatgaaa 358

<210> 169
<211> 1265
<212> DNA
<213> Homo sapiens

<400> 169
ttctgtccac accaatctta gagctctgaa agaatttgtc tttaaatatc ttttaatagt 60
aacatgtatt ttatggacca aattgacatt ttcgactatt ttttcccaaa aaaagtcagg 120
tgaatttcag cacactgagt tgggaatttc ttatcccaga agwcggcacg agcaatttca 180

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tatttattta agattgattc catactccgt tttcaaggag aatccctgca gtctccttaa 240
aggtagaaca aatactttct attttttttt caccattgtg ggattggact ttaagaggtg 300
actctaaaaa aacagagaac aaatatgtct cagttgtatt aagcacggac ccatattatc 360
atattcactt aaaaaaatga tttcctgtgc accttttggc aacttctctt ttcaatgtag 420
ggaaaaactt agtcaccctg aaaacccaca aaataaataa aacttgtaga tgtgggcaga 480
argtttgggg gtggacattg tatgtgttta aattaaaccc tgtatcactg agaagctgtt 540
gtatgggtca gagaaaatga atgcttagaa gctgttcaca tcttcaagag cagaagcaaa 600
ccacatgtct cagctatatt attatttatt ttttatgcat aaagtgaatc atttcttctg 660
tattaatttc caaagggttt taccctctat ttaaatgctt tgaaaaacag tgcattgaca 720
atgggttgat atttttcttt aaaagaaaaa tataattatg aaagccaaga taatctgaag 780
cctgttttat tttaaaactt tttatgttct gtggttgatg ttgtttgttt gtttgtttct 840
atttgttgg tttttactt tgtttttgt tttgttttgt tttggtttdg catactacat 900
gcagtttctt taaccaatgt ctgtttggct aatgtaatta aagttgttaa tttatatgag 960
tgcatttcaa ctatgtcaat ggtttcttaa tatttattgt gtagaagtac tggtaatttt 1020
tttatttaca atatgtttaa agagataaca gtttgatatg ttttcatgtg tttatagcag 1080
aagttattta tttctatggc attccagcgg atattttggt gtttgcgagg catgcagtca 1140
atattttgta cagttagtgg acagtattca gcaacgcctg atagcttctt tggccttatg 1200
ttaaataaaa agacctgttt gggatgtaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1260
aaaaa                                                             1265
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<210> 170
<211> 383
<212> DNA
<213> Homo sapiens

<400> 170

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tgtaagtcga gcagtgtgat gacgatattc ttcttattaa tgtggtaatt gaacaaatga 60
tctgtgatac tgatcctgag ctaggaggcg ctgttcagtt aatgggactt cttcgtactc 120
taattgatcc agagaacatg ctggctacaa ctaataaaac cgaaaaaagt gaatttctaa 180
atttttcta caaccattgt atgcatgttc tcacagcacc acttttgacc aatacttcag 240
aagacaaatg tgaaaaggat aatatagttg gatcaaacaa aaacaacaca atttgtcccg 300
ataattatca aacagcacag ctacttgcct taattttaga gttactcaca ttttgtgtgg 360
aacatcacac tgctcgactt aca                                         383
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<210> 171
<211> 383
<212> DNA
<213> Homo sapiens

<400> 171

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tgggcacctt caatatcgca agttaaaaat aatgttgagt ttattatact tttgacctgt 60
ttagctcaac agggtgaagg catgtaaaga atgtggactt ctgaggaatt ttcttttaaa 120
aagaacataa tgaagtaaca ttttaattac tcaaggacta cttttggttg aagtttataa 180
tctagatacc tctacttttt gtttttgctg ttcgacagtt cacaaagacc ttcagcaatt 240
tacagggtaa aatcgttgaa gtagtggagg tgaaactgaa atttaaaatt attctgtaaa 300
tactataggg aaagaggctg agcttagaat cttttggttg ttcatgtgtt ctgtgctctt 360
atcatcacac tgctcgactt aca                                         383
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<210> 172
<211> 699
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 641
<223> n = A,T,C or G

<400> 172
tcgggtgatg cctcctcagg cttgtcgtta gtgtacacag agctgctcat gaagcgacag 60
cggctgcccc tggcacttca gaacctcttc ctctacactt ttggtgcgct tctgaatcta 120
ggtctgcatg ctggcggcgg ctctggccca ggcctcctgg aaagtttctc aggatgggca 180
gcactcgtgg tgctgagcca ggcactaaat ggactgctca tgtctgctgt catggagcat 240
ggcagcagca tcacacgcct ctttgtggtg tcctgctcgc tggtggtcaa cgccgtgctc 300
tcagcagtcc tgctacggct gcagctcaca gccgccttct tcctggccac attgctcatt 360
ggcctggcca tgcgcctgta ctatggcagc cgctagtccc tgacaacttc caccctgatt 420
ccggaccctg tagattgggc gccaccacca gatccccctc ccaggccttc ctccctctcc 480
catcagcggc cctgtaacaa gtgccttgtg agaaaagctg gagaagtgag ggcagccagg 540
ttattctctg gaggttggtg gatgaagggg taccctagg agatgtgaag tgtgggtttg 600
gttaaggaaa tgcttaccat cccccacccc caaccaagtt nttccagact aaagaattaa 660
ggtaacatca atacctaggc ctgaggaggc atcacccga 699

<210> 173
<211> 701
<212> DNA
<213> Homo sapiens

<400> 173
tcgggtgatg cctcctcagg ccagatcaaa cttggggttg aaaactgtgc aaagaaatca 60
atgtcggaga aagaattttg caaaagaaaa atgcctaatc agtactaatt taataggtca 120
cattagcagt ggaagaagaa atgttgatat tttatgtcag ctattttata atcaccagag 180
tgcttagctt catgtaagcc atctcgtatt cattagaaat aagaacaatt ttattcgtcg 240
gaaagaactt ttcaatttat agcatcttaa ttgctcagga ttttaaattt tgataaagaa 300
agctccactt ttggcaggag taggggcag ggagagagga ggctccatcc acaaggacag 360
agacaccagg gccagtaggg tagctggtgg ctggatcagt cacaacggac tgacttatgc 420
catgagaaga aacaacctcc aaatctcagt tgcttaatac aacacaagct catttcttgc 480
tcacgttaca tgtcctatgt agatcaacag caggtgactc agggacccag gctccatctc 540
catatgagct tccatagtca ccaggacacg ggctctgaaa gtgtcctcca tgcagggaca 600
catgcctctt cctttcattg ggcagagcaa gtcacttatg gccagaagtc acactgcagg 660
gcagtgccat cctgctgtat gcctgaggag gcatcacccg a 701

<210> 174
<211> 700
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19
<223> n = A,T,C or G

<400> 174
tcgggtgatg cctcctcang cccctaaatc agagtccagg gtcagagcca caggagacag 60
ggaaagacat agattttaac cggccccctt caggagattc tgaggctcag ttcactttgt 120
tgcagtttga acagaggcag caaggctagt ggttaggggc acggtctcta aagctgcact 180
gcctggatct gcctcccagc tctgccagga accagctgcg tggccttgag ctgctgacac 240
gcagaaagcc ccctgtggac ccagtctcct cgtctgtaag atgaggacag gactctagga 300
acccttttccc ttggtttggc ctcactttca caggctccca tcttgaactc tatctactct 360

tttcctgaaa ccttgtaaaa gaaaaaagtg ctagcctggg caacatggca aaaccctgtc 420
tctacaaaaa atacaaaaat tagttgggtg tggtggcatg tgcctgtagt cccagccact 480
tgggaggtgc tgaggtggga ggatcacttg agcccgggag gtggaggttg cagtgagcca 540
agatcatgcc actgcactcc agcctgagta atagagtaag actctgtctc aaaaacaaca 600
acaacaacag tgagtgtgcc tctgtttccg ggttggatgg ggcaccacat ttatgcatct 660
ctcagatttg gacgctgcag cctgaggagg catcacccga 700

<210> 175
<211> 484
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 30
<223> n = A,T,C or G

<400> 175
tatagggcga attgggcccg agttgcatgn tcccggccgc catggccgcg ggattcgggt 60
gatgcctcct caggcttgtc tgccacaagc tacttctctg agctcagaaa gtgccccttg 120
atgagggaaa atgtcctact gcactgcgaa tttctcagtt ccattttacc tcccagtcct 180
ccttctaaac cagttaataa attcattcca caagtattta ctgattacct gcttgtgcca 240
gggactattc tcaggctgaa gaaggtggga ggggagggcg gaacctgagg agccacctga 300
gccagcttta tatttcaacc atggctggcc catctgagag catctcccca ctctcgccaa 360
cctatcgggg catagcccag ggatgccccc aggcggccca ggttagatgc gtccctttgg 420
cttgtcagtg atgacataca ccttagctgc ttagctggtg ctggcctgag gaggcatcac 480
ccga 484

<210> 176
<211> 432
<212> DNA
<213> Homo sapiens

<400> 176
tcgggtgatg cctcctcagg gctcaaggga tgagaagtga cttctttctg gagggaccgt 60
tcatgccacc caggatgaaa atggataggg acccacttgg aggacttgct gatatgtttg 120
gacaaatgcc aggtagcgga attggtactg gtccaggagt tatccaggat agattttcac 180
ccaccatggg acgtcatcgt tcaaatcaac tcttcaatgg ccatggggga cacatcatgc 240
ctcccacaca atcgcagttt ggagagatgg gaggcaagtt tatgaaaagc caggggctaa 300
gccagctcta ccataaccag agtcagggac tcttatccca gctgcaagga cagtcgaagg 360
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ggcatcaccc ga 432

<210> 177
<211> 788
<212> DNA
<213> Homo sapiens

<400> 177
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attggattgc cacacggctc acattgcatg caagtttgct gagctgaagg aaaagattga 600
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cattgttgat atggttcctg gcaagcccat gtgtgttgag agcttctcag actatccacc 720
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acatgcta 788

<210> 178
<211> 786
<212> DNA
<213> Homo sapiens

<400> 178
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attgttgttc gtttcttttc attaaaggtt taatcagaca gatcagacag cataattttg 180
tatttaatga cagaaacgtt ggtacatttc ttcatgaatg agcttgcatt ctgaagcaag 240
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tacacacttt atatatatgt atgtatgtat gaaaacatga aattagtttg tcaaatatgt 480
gtgtgtttag tattttagct tagtgcaact atttccacat tatttattaa attgatctaa 540
gacactttct tgttgacacc ttgaatatta atgttcaagg gtgcaatgtg tattccttta 600
gattgttaaa gcttaattac tatgatttgt agtaaattaa cttttaaaat gtatttgagc 660
ccttctgtag tgtcgtaggg ctcttacagg gtgggaaaga ttttaatttt ccagttgcta 720
attgaacagt atggcctcat tatatatttt gatttatagg agtttgtgtc tgggctcaac 780
atgcta 786

<210> 179
<211> 796
<212> DNA
<213> Homo sapiens

<400> 179
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gcttttaaaa agccagtgaa cctttttaat actttggcaa ccttctttca caggcaaaga 120
acacccccat ccgccccttg tttggagtgc agagtttggc tttggttctt tgccttgcct 180
ggagtatact tctaattcct gttgtcctgc acaagctgaa taccgagcta cccaccgcca 240
cccaggccag gtttccactc atttattact ttatgtttct gttccattgc tggtccacag 300
aaataagttt tcctttggag gaatgtgatt ataccccttt aatttcctcc ttttgctttt 360
ttttaatatc attggtatgt gtttggccca gaggaaactg aaattcacca tcatcttgac 420
tggcaatccc attaccatgc ttttttaaa aaacgtaatt tttcttgcct tacattggca 480
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atgagacctg aagcacagac tgtcttacca caaaaggtga caagatctca aaccttagcc 600
aaagggctat gtcaggtttc aatgctatct gcttctgttc ctgctcactg ttctggattt 660
tgtccttctt catccctagc accagaattt cccagtctcc ctccctacct tcccttgttt 720
taattctaat ctatcagcaa aataactttt caaatgtttt aaccggtatc tccatgtgtc 780
tgggctcaac atgcta 796

<210> 180
<211> 488

<212> DNA
<213> Homo sapiens

<400> 180
ggatgtgctg caaggcgatt aagttgggta acgccagggt tttcccagtc acgacgttgt 60
aaaacgacgg ccagtgaatt gtaatacgac tcactatagg gcgaattggg cccgacgtcg 120
catgctcccg gccgccatgg ccgcgggata gcatgttgag cccagacacc tgcaggtcat 180
ttggagagat ttttcacgtt accagcttga tggtcttttt caggaggaga gacactgagc 240
actcccaagg tgaggttgaa gatttcctct agatagccgg ataagaagac taggagggat 300
gcctagaaaa tgattagcat gcaaatttct acctgccatt tcagaactgt gtgtcagccc 360
acattcagct gcttcttgtg aactgaaaag agagaggtat tgagactttt ctgatggccg 420
ctctaacatt gtaacacagt aatctgtgtg tgtgtgggtg tgtgtgtgtg tctgggctca 480
acatgcta 488

<210> 181
<211> 317
<212> DNA
<213> Homo sapiens

<400> 181
tagcatgttg agcccagaca cggcgacggt acctgatgag tggggtgatg gcacctgtga 60
aaaggaggaa cgtcatcccc catgatattg gggacccaga tgatgaacca tggctccgcg 120
tcaatgcata tttaatccat gatactgctg attggaagga cctgaacctg aagtttgtgc 180
tgcaggttta tcgggactat tacctcacgg gtgatcaaaa cttcctgaag gacatgtggc 240
ctgtgtgtct agtaagggat gcacatgcag tggccagtgt gccaggggta tggttggtgt 300
ctgggctcaa catgcta 317

<210> 182
<211> 507
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 493
<223> n = A,T,C or G

<400> 182
tagcatgttg agcccagaca ctggctgtta gccaaatcct ctctcagctg ctccctgtgg 60
tttggtgact caggattaca gaggcatcct gtttcaggga acaaaaagat tttagctgcc 120
agcagagagc accacataca ttagaatggt aaggactgcc acctccttca agaacaggag 180
tgagggtggt ggtgaatggg aatggaagcc tgcattccct gatgcatttg tgctctctca 240
aatcctgtct tagtcttagg aaaggaagta aagtttcaag gacggttccg aactgctttt 300
tgtgtctggg ctcaacatgc tatcccgcgg ccatggcggc cgggagcatg cgacgtcggg 360
cccaattcgc cctatagtga gtcgtattac aattcactgg ccgtcgtttt acaacgtcgt 420
gactgggaaa accctggcgt tacccaactt aatcgccttg cagcacatcc ccctttccca 480
gctggcgtaa tancgaaaag gcccgca 507

<210> 183
<211> 227
<212> DNA
<213> Homo sapiens

<400> 183

gatttacgct gcaacactgt ggaggtagcc ctggagcaag gcaggcatgg atgcttctgc 60
aatccccaaa tggagcctgg tatttcagcc aggaatctga gcagagcccc ctctaattgt 120
agcaatgata agttattctc tttgttcttc aaccttccaa tagccttgag cttccagggg 180
agtgtcgtta atcattacag cctggtctcc acagtgttgc agcgtaa 227

<210> 184
<211> 225
<212> DNA
<213> Homo sapiens

<400> 184
ttacgctgca acactgtgga gcagattaac atcagacttt tctatcaaca tgactggggt 60
tactaaaaag acaacaaatc aatggcttca aaagtctaag gaataatttc gatacttcaa 120
ctttataaaa cctgacaaaa ctatcaatca agcataaaga cagatgaaga acatttccag 180
atttggccca atcagatatt ttacctccac agtgttgcag cgtaa 225

<210> 185
<211> 597
<212> DNA
<213> Homo sapiens

<400> 185
ggcccgacgt cgcatgctcc cggccgccat ggccgcggga ttcgttaggg tctctatcca 60
ctgggaccca taggctagtc agagtattta gagttgagtt cctttctgct tcccagaatt 120
tgaaagaaaa ggagtgaggt gatagagctg agagatcaga tttgcctctg aagcctgttc 180
aagatgtatg tgctcagacc ccaccactgg ggcctgtggg tgaggtcctg ggcatctatt 240
tgaatgaatt gctgaagggg agcactatgc caaggaaggg gaacccatcc tggcactggc 300
acaggggtca ccttatccag tgctcagtgc ttctttgctg ctacctggtt ttctctcata 360
tgtgaggggc aggtaagaag aagtgcccrg tgttgtgcga gttttagaac atctaccagt 420
aagtggggaa gtttcacaaa gcagcagctt tgttttgtgt attttcacct tcagttagaa 480
gaggaaggct gtgagatgaa tgttagttga gtggaaaaga cggtaagct tagtggatag 540
agaccctaac gaatcactag tgcggccgcc ttgcaggtcg accatatggg agagctc 597

<210> 186
<211> 597
<212> DNA
<213> Homo sapiens

<400> 186
ggcccgaagt tgcatgttcc cggccgccat ggccgcggga ttcgttaggg tctctatcca 60
ctacctaaaa aatcccaaac atataactga actcctcaca cccaattgga ccaatccatc 120
accccagagg cctacagatc ctcctttgat acataagaaa atttccccaa actacctaac 180
tatatcattt tgcaagattt gttttaccaa attttgatgg cctttctgag cttgtcagtg 240
tgaaccacta ttacgaacga tcggatatta actgcccctc accgtccagg tgtagctggc 300
aacatcaagt gcagtaaata ttcattaagt tttcacctac taaggtgctt aaacacccta 360
gggtgccatg tcggtagcag atcttttgat ttgtttttat ttcccataag ggtcctgttc 420
aaggtcaatc atacatgtag tgtgagcagc tagtcactat cgcatgactt ggagggtgat 480
aatagaggcc tcctttgctg ttaaagaact cttgtcccag cctgtcaaag tggatagaga 540
ccctaacgaa tcactagtgc ggccgcctgc aggtcgacca tatgggagag ctcccaa 597

<210> 187
<211> 324
<212> DNA
<213> Homo sapiens

<400> 187
tcgttagggt ctctatccac ttgcaggtaa aatccaatcc tgtgtatatc ttatagtctt 60
ccatatgtag tggttcaaga gactgcagtt ccagaaagac tagccgagcc catccatgtc 120
ttccacttaa ccctgctttg ggttacacat cttaactttt ctgttcaagt ttctctgtgt 180
agtttatagc atgagtattg ggawaatgcc ctgaaacctg acatgagatc tgggaaacac 240
aaacttactc aataagaatt tctcccatat ttttatgatg gaaaaatttc acatgcacag 300
aggagtggat agagacccta acga 324

<210> 188
<211> 178
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 46
<223> n = A,T,C or G

<400> 188
gcgcggggat tcggggtgat acctcctcat gccaaaatac aacgtntaat ttcacaactt 60
gccttccaat ttacgcattt tcaatttgct ctccccattt gttgagtcac aacaaacacc 120
attgcccaga aacatgtatt acctaacatg cacatactct taaaactact catccctt 178

<210> 189
<211> 367
<212> DNA
<213> Homo sapiens

<400> 189
tgacaccttg tccagcatct gacacagtct tggctcttgg aaaatattgg ataaatgaaa 60
atgaatttct ttagcaagtg gtataagctg agaatatacg tatcacatat cctcattcta 120
agacacattc agtgtccctg aaattagaat aggacttaca ataagtgtgt tcactttctc 180
aatagctgtt attcaattga tggtaggcct taaaagtcaa agaaatgaga gggcatgtga 240
aaaaaagctc aacatcactg atcattagaa aacttccatt caaaccccca atgagatacc 300
atctcatacc agtcagaatg gctattatta aaaagtcaaa aaataacaga tgctggacaa 360
ggtgtca 367

<210> 190
<211> 369
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 323
<223> n = A,T,C or G

<400> 190
gacaccttgt ccagcatctg acaacgctaa cagcctgagg agatctttat ttatttattt 60
agtttttact ctggctaggc agatggtggc taaaacattc atttacccat ttattcattt 120
aattgttcct gcaaggccta tggatagagt attgtccagc actgctctgg aagctaggag 180
catggggatg aacaagatag gctacatcct gttcccacag aacttccact ttagtctggg 240
aaacagatga tatatacaaa tatataaatg aattcaggta gttttaagta cgaaaagaat 300

aagaaagcag agtcatgatt tanaatgctg gaaacagggg ctattgcttg agatattgaa 360
ggtgcccaa 369

<210> 191
<211> 369
<212> DNA
<213> Homo sapiens

<400> 191
tgacaccttg tccagcatct gcacagggaa aagaaactat tatcagagtg aacaggcaac 60
ctacagaatg ggagaaaatt tttgcaatct atccatctga caaagggcta atatccagaa 120
tctacaaaga acttatacaa atttacaaga aacaaacaaa caaacaactc ctcaaaaagt 180
gggtgaagga tgtgaacaga cacttctcaa aagaagacat ttatggggcc aacaaacata 240
tgaaaaaaag ctcatcatca ctggtcacta gataaatgca aatcaaaacc acaatgagat 300
accatctcat tccagttaga atggcaatca ttaaaaagtc aggaaacaac agatgctgga 360
caaggtgtc 369

<210> 192
<211> 449
<212> DNA
<213> Homo sapiens

<400> 192
tgacgcttgg ccacttgaca cttcatcttt gcacagaaaa acttctttac agatttaatt 60
caagactggt ctagtgacag tcctccagac atttttttcat ttgttccata tacgtggaat 120
tttaaaatca tgtttcatca gtttgaaatg atttgggctg ctaatcaaca caattggatc 180
gactgttcta ctaaacaaca ggaaaatgtg tatctggcag cctgtggaga aacactaaac 240
attgattttt ctttgccttt tacggacttt gttccagcta catgtaatac caagttctct 300
ttaagaggag aagatgttga tcttcatttg tttctaccag actgccaccc tagtaaatat 360
tctttattta tgctggtaaa aaattgccat ccaaataaga tgattcatga tactggtatt 420
cctgctgagt gtcaagtggc caagcgtca 449

<210> 193
<211> 372
<212> DNA
<213> Homo sapiens

<400> 193
tgacgcttgg ccacttgaca ccagggatgt akcagttgaa tataatcctg caattgtaca 60
tattggcaat ttcccatcaa acattctaga aagagacaac caggattgct aggccataaa 120
agctgcaata aataactggt aattgcagta atcatttcag gccaattcaa tccagtttgg 180
ctcagaggtg cctttggctg agagaagagg tgagatataa tgtgttttct tgcaacttct 240
tggaagaata actccacaat agtctgagga ctagatacaa acctatttgc cattaaagca 300
ccagagtctg ttaattccag tactgataag tgttggagat tagactccag tgtgtcaagt 360
ggccaagcgt ca 372

<210> 194
<211> 309
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 140, 205

<223> n = A,T,C or G

<400> 194
tgacgcttgg ccacttgaca cttatgtaga atccatcgtg ggctgatgca agccctttat 60
ttaggcttag tgttgtgggc accttcaata tcacactaga gacaaacgcc acaagatctg 120
cagaaacatt cagttctgan cactcgaatg gcaggataac tttttgtgtt gtaatccttc 180
acatatacaa aaacaaactc tgcantctca cgttacaaaa aaacgtactg ctgtaaaata 240
ttaagaaggg gtaaaggata ccatctataa caaagtaact tacaactagt gtcaagtggc 300
caagcgtca 309

<210> 195
<211> 312
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 100, 270
<223> n = A,T,C or G

<400> 195
tgacgcttgg ccacttgaca cccaatctcg cacttcatcc tcccagcacc tgatgaagta 60
ggactgcaac tatccccact tcccagatga ggggaccaan gtacacatta ggacccggat 120
gggagcacag atttgtccga tcccagactc caagcactca gcgtcactcc aggacagcgg 180
ctttcagata aggtcacaaa catgaatggc tccgacaacc ggagtcagtc cgtgctgagt 240
taaggcaatg gtgacacgga tgcacgtgtn acctgtaatg gttcatcgta agtgtcaagt 300
ggccaagcgt ca 312

<210> 196
<211> 288
<212> DNA
<213> Homo sapiens

<400> 196
tgtatcgacg tagtggtctc ctcagccatg cagaactgtg actcaattaa acctctttcc 60
tttatgaatt acccaatctc gggtagtgtc tttatagtag tgtgagaatg gactaataca 120
agtacatttt acttagtaat aataataaac aaatatatta cattttgtg tatttactac 180
accatatttt ttattgttat tgtagtgtac accttctact tattaaaaga aataggcccg 240
aggcgggcag atcacgaggt caggagatgg agaccactac gtcgatac 288

<210> 197
<211> 289
<212> DNA
<213> Homo sapiens

<400> 197
ttgggcacct tcaatatcat gacaggtgat gtgataacca agaaggctac taagtgatta 60
atgggtgggt aatgtataca gagtaggtac actggacaga ggggtaattc atagccaagg 120
caggagaagc agaatggcaa aacatttcat cacactactc aggatagcat gcagtttaaa 180
acctataagt agtttatttt tggaattttc cacttaatat tttcagactg caggtaacta 240
aactgtggaa cacaagaaca tagataaggg gagaccacta cgtcgatac 289

<210> 198
<211> 288

<212> DNA
<213> Homo sapiens

<400> 198
gtatcgacgt agtggtctcc caagcagtgg gaagaaaacg tgaaccaatt aaaatgtatc 60
agatacccca aagaaaggcg cttgagtaaa gattccaagt gggtcacaat ctcagatctt 120
aaaattcagg ctgtcaaaga gatttgctat gaggttgctc tcaatgactt caggcacagt 180
cggcaggaga ttgaagccct ggccattgtc aagatgaagg agctttgtgc catgtatggc 240
aagaaagacc ccaatgagcg ggactcctgg agaccactac gtcgatac 288

<210> 199
<211> 1027
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 21, 36, 39, 40, 42, 63, 98, 116, 145, 162, 173, 865,
885, 891, 916, 924, 927, 929, 934, 942, 949, 976, 983, 988,
989, 1009, 1014
<223> n = A,T,C or G

<400> 199
gctttttggg aaaaacncaa ntgggggaaa gggggnttnn tngcaagggg ataaaggggg 60
aancccaggg tttccccatt cagggaggtg taaaaagncg gccaggggat tgtaanagga 120
ttcaataata gggggaatgg gcccngaagt tgcaaggttc cngcccgcca tgnccgcggg 180
atttagtgac attacgacgs tggtaataaa gtgggsccaa waaatatttg tgatgtgatt 240
tttsgaccag tgaacccatt gwacaggacc tcatttccty tgagatgrta gccataatca 300
gataaaagrt tagaagtytt tctgcacgtt aacagcatca ttaaatggag tggcatcacc 360
aatttcaccc tttgttagcc gataccttcc ccttgaaggc attcaattaa gtgaccaatc 420
gtcatacgag aggggatggc atggggattg atgatgatat caggggtgat accttcacag 480
gtgaaaggca tatcctcttg tctatactga ataccacaag tacccttttg accatgtcga 540
ctagcaaatt tgtctccaat ctgtgtwatc cctaacagag cgtaccctta ttttacaaaa 600
tttatatcct tcctgattga gagttaccat aacctgatcc acaatgcccg tctcgctwgt 660
tctgagaaaa gtgctacagt ctctcttggt atagcgtcta ttggtgctct ccaattcatc 720
ttcatttttc aggcaaggtg aactgttttg cctataataa cmtcatctcc tgatacmcga 780
aacccckgga rctatcaaac catcatcatc cagcgttckt watgtymcta aatccctatt 840
gcggccgcct gcaggtcaac atatnggaaa acccccccacc ccttnggagc ntaccttgaa 900
ttttccatat gtcccntaaa ttanctngnc ttancctggc cntaacctnt tccggtttaa 960
attgtttccg ccccccnttcc ccncccttnna accggaaacc ttaattttna accnggggtt 1020
cctatcc 1027

<210> 200
<211> 207
<212> DNA
<213> Homo sapiens

<400> 200
agtgacatta cgacgctggc catcttgaat cctagggcat gaagttgccc caaagttcag 60
cacttggtta agcctgatcc ctctggttta tcacaaagaa taggatggga taaagaaagt 120
ggacacttaa ataagctata aattatatgg tccttgtcta gcaggagaca actgcacagg 180
tatactacca gcgtcgtaat gtcacta 207

<210> 201

<211> 209
<212> DNA
<213> Homo sapiens

<400> 201
tgggcacctt caatatctat taaaagcaca aatactgaag aacacaccaa gactatcaat 60
gaggttacat ctggagtcct cgatatatca ggaaaaaatg aagtgaacat tcacagagtt 120
ttacttcttt gggaactcaa atgctagaaa agaaaagggt gccctctttc tctggcttcc 180
tggtcctatc cagcgtcgta atgtcacta 209

<210> 202
<211> 349
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 202
ntacgctgca acactgtgga gccactggtt tttattcccg gcaggttatc cagcaaacag 60
tcactgaaca caccgaagac cgtggtatgg taaccgttca cagtaatcgt tccagtcgtc 120
tgcgggaccc cgacgagcgt cactgggtac agaccagatt cagccggaag agaaagcgcc 180
gcagggagag actcgaactc cactccgctg gtgagcagcc ccatgttttc aactcgaagt 240
tcaaacggca ttgggttata taccatcagc tgaacttcac acacatctcc ttgaacccac 300
tggaaatcta ttttcttgtt ccgctcttct ccacagtgtt gcagcgtaa 349

<210> 203
<211> 241
<212> DNA
<213> Homo sapiens

<400> 203
tgctcctctt gccttaccaa cccaaagccc actgtgaaat atgaagtgaa tgacaaaatt 60
cagttttcaa cgcaatatag tatagtttat ctgattcttt tgatctccag gacactttaa 120
acaactgcta ccaccaccac caacctaggg atttaggatt ctccacagac cagaaattat 180
ttctcctttg agtttcaggc tcctctggga ctcctgttca tcaatgggtg gtaaatggct 240
a 241

<210> 204
<211> 248
<212> DNA
<213> Homo sapiens

<400> 204
tagccattta ccacccatct gcaaaccswg acmwwcargr cywgwackya ggcgatttga 60
agtactggta atgctctgat catgttagtt acataagtgt ggtcagttta caaaaattca 120
cagaactaaa tactcaatgc tatgtgttca tgtctgtgtt tatgtgtgtg taatgtttca 180
attaagtttt tttaaaaaaa agagatgatt tccaaataag aaagccgtgt tggtaaggca 240
agaggagc 248

<210> 205
<211> 505

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 447
<223> n = A,T,C or G

<400> 205
tacgctgcaa cactgtggag ccattcatac aggtccctaa ttaaggaaca agtgattatg 60
ctacctttgc acggttaggg taccgcggcc gttaaacatg tgtcactggg caggcggtgc 120
ctctaatact ggtgatgcta gaggtgatgt ttttggtaaa caggcggggt aagatttgcc 180
gagttccttt tacttttttt aacctttcct tatgagcatg cctgtgttgg gttgacagtg 240
ggggtaataa tgacttgttg gttgattgta gatattgggc tgttaattgt cagttcagtg 300
ttttaatctg acgcaggctt atgcggagga gaatgttttc atgttactta tactaacatt 360
agttcttcta tagggtgata gattggtcca attgggtgtg aggagttcag ttatatgttt 420
gggatttttt aggtagtggg tgttganctt gaacgctttc ttaattggtg gctgctttta 480
rgcctactat gggtggtaaa tggct 505

<210> 206
<211> 179
<212> DNA
<213> Homo sapiens

<400> 206
tagactgact catgtcccct accaaagccc atgtaaggag ctgagttctt aaagactgaa 60
gacagactat tctctggaga aaaataaaat ggaaattgta ctttaaaaaa aaaaaaaatc 120
ggccgggcat ggtagcacac acctgtaatc ccagctacta ggggacatga gtcagtcta 179

<210> 207
<211> 176
<212> DNA
<213> Homo sapiens

<400> 207
agactgactc atgtccccta ccccaccttc tgctgtgctg ccgtgttcct aacaggtcac 60
agactggtac tggtcagtgg cctgggggtt ggggacctct attatatggg atacaaattt 120
aggagttgga attgacacga tttagtgact gatgggatat gggtggtaaa tggcta 176

<210> 208
<211> 196
<212> DNA
<213> Homo sapiens

<400> 208
agactgactc atgtccccta tttaacaggg tctctagtgc tgtgaaaaaa aaaaatgctg 60
aacattgcat ataacttata ttgtaagaaa tactgtacaa tgactttatt gcatctgggt 120
agctgtaagg catgaaggat gccaagaagt ttaaggaata tgggtggtaa atggctaggg 180
gacatgagtc agtcta 196

<210> 209
<211> 345
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 56
<223> n = A,T,C or G

<400> 209
gacgcttggc cacttgacac cttttatttt ttaaggattc ttaagtcatt tangtnactt 60
tgtaagtttt tcctgtgccc ccataagaat gatagcttta aaaattatgc tggggtagca 120
aagaagatac ttctagcttt agaatgtgta ggtatagcca ggattcttgt gaggaggggt 180
gatttagagc aaatttctta ttctccttgc ctcatctgta acatggggat aataatagaa 240
ctggcttgac aaggttggaa ttagtattac atggtaaata catgtaaaat gtttagaatg 300
gtgccaagta tctaggaagt acttgggcat gggtggtaaa tggct 345

<210> 210
<211> 178
<212> DNA
<213> Homo sapiens

<400> 210
gacgcttggc cacttgacac tagagtaggg tttggccaac tttttctata aaggaccaga 60
gagtaaatat ttcaggcttt gtgggttgtg cagtctctct tgcaactact cagctctgcc 120
attgtagcat agaaatcagc catagacagg acagaaatga atgggtggta aatggcta 178

<210> 211
<211> 454
<212> DNA
<213> Homo sapiens

<400> 211
tgggcacctt caatatctat ccagcgcatc taaattcgct tttttcttga ttaaaaattt 60
caccacttgc tgtttttgct catgtatacc aagtagcagt ggtgtgaggc catgcttgtt 120
ttttgattcg atatcagcac cgtataagag cagtgctttg gccattaatt tatcttcatt 180
gtagacagca tagtgtagag tggtatctcc atactcatct ggaatatttg gatcagtgcc 240
atgttccagc aacattaacg cacattcatc ttcctggcat tgtacggcct ttgtcagagc 300
tgtcctcttt ttgttgtcaa ggacattaag ttgacatcgt ctgtccagca cgagttttac 360
tacttctgaa ttcccattgg cagaggccag atgtagagca gtcctctttt gcttgtccct 420
cttgttcaca tcagtgtccc tgagcataac ggaa 454

<210> 212
<211> 337
<212> DNA
<213> Homo sapiens

<400> 212
tccgttatgc cacccagaaa acctactgga gttacttatt aacatcaagg ctggaaccta 60
tttgcctcag tcctatctga ttcatgagca catggttatt actgatcgca ttgaaaacat 120
tgatcacctg ggtttcttta tttatcgact gtgtcatgac aaggaaactt acaaactgca 180
acgcagagaa actattaaag gtattcagaa acgtgaagcc agcaattgtt tcgcaattcg 240
gcattttgaa aacaaatttg ccgtggaaac tttaatttgt tcttgaacag tcaagaaaaa 300
cattattgag gaaaattaat atcacagcat aacggaa 337

<210> 213
<211> 715

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 552, 630, 649, 657, 691, 693, 697
<223> n = A,T,C or G

<400> 213
tcgggtgatg cctcctcagg catcttccat ccatctcttc aagattagct gtcccaaatg 60
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acatacagaa atacattaag atattagaaa gtgtttttgc ttgtgtacta ctaattaggg 420
aagcaccttg tatagttcct cttctaaaat tgaagtagat tttaaaaacc catgtaattt 480
aattgagctc tcagttcaga ttttaggaga attttaacag ggatttggtt ttgtctaaat 540
tttgtcaatt tntttagtta atctgtataa ttttataaat gtcaaactgt atttagtccg 600
ttttcatgct gctatgaaag aaatacccan gacagggtta tttataaang gaaagangtt 660
aatttgactc ccagttcaca ggcctgagga ngnatcnccc gaaatcctta ttgcg 715

<210> 214
<211> 345
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 8, 15
<223> n = A,T,C or G

<400> 214
ggtaangngc atacntcggt gctccggccg ccggagtcgg gggattcggg tgatgcctcc 60
tcaggcccac ttgggcctgc ttttcccaaa tggcagctcc tctggacatg ccattccttc 120
tcccacctgc ctgattcttc atatgttggg tgtccctgtt tttctggtgc tatttcctga 180
ctgctgttca gctgccactg tcctgcaaag cctgcctttt taaatgcctc accattcctt 240
catttgtttc ttaaatatgg gaagtgaaag tgccacctga ggccgggcac agtggctcac 300
gcctgtaatc ccagcacttt gggagcctga ggaggcatca cccga 345

<210> 215
<211> 429
<212> DNA
<213> Homo sapiens

<400> 215
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atccttctga ccttttgggt tttaagcagg aggtgtcaga aaagttacca cagggataac 180
tggcttgtgg cggccaagcg ttcatagcga cgtcgctttt tgatccttcg atgtcggctc 240
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gcttgcctt 429

<210> 216
<211> 593
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 429, 446, 498, 512, 538, 543, 557
<223> n = A,T,C or G

<400> 216
tgacacctat gtccngcatc tgttcacagt ttccacaaat agccagcctt tggccacctc 60
tctgtcctga ggtatacaag tatatcagga ggtgtatacc ttctcttctc ttccccacca 120
aagagaacat gcaggctctg gaagctgtct taggagcctt tgggctcaga atttcagagt 180
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cggaggaggg tcacagagcc ctcagctcaa gcccctgtgc cttagtctaa aagcagcttt 300
ggatgaggaa gcaggttaag taacatacgt aagcgtacac aggtagaaag tgctgggagt 360
cagaattgca cagtgtgtag gagtagtacc tcaatcaatg agggcaaatc aactgaaaga 420
agaagaccna ttaatgaatt gcttangggg aaggatcaag gctatcatgg agatctttct 480
aggaagatta ttgtttanaa ttatgaaagg antagggcag ggacagggcc agaagtanaa 540
ganaacattg cctatanccc ttgtcttgca cccagatgct ggacaaggtg tca 593

<210> 217
<211> 335
<212> DNA
<213> Homo sapiens

<400> 217
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cctggttctg tgggctccgt ggcaatgaat tcttctgtga agtggatgaa gactacatcc 120
aggacaaatt taatcttact ggactcaatg agcaggtccc tcactatcga caagctctag 180
acatgatctt ggacctggag cctgatgaag aactggaaga caaccccaac cagagtgacc 240
tgattgagca ggcagccgag atgctttatg gattgatcca cgcccgctac atccttacca 300
accgtggcat cgcccagatg ctggacaagg tgtca 335

<210> 218
<211> 248
<212> DNA
<213> Homo sapiens

<400> 218
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tgtatgaaat gggactgtaa gtacagaggg aagggtggcc cttatcgcca gaagttggta 120
gatgcgtccc cgtcatgaaa tgttgtgtca ctgcccgaca tttgccgaat tactgaaatt 180
ccgtagaatt agtgcaaatt ctaacgttgt tcatctaaga ttatggttcc atgtttctag 240
tactttta 248

<210> 219
<211> 530
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 49, 216, 265, 275, 281, 296, 371, 407, 424, 429, 454, 456, 458, 464, 474, 476, 506, 509, 527, 530
<223> n = A,T,C or G

<400> 219
tgacgcttgg ccacttgaca caagtagggg ataaggacaa agacccatna ggtggcctgt 60
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agcctggttt ntcctcctca ctccagcctc tctccatacc atggtanggg ggtgctgttc 420
cacncaaang gtcaggtgtg tctggggaat cctnananct gccnggagtt tccnangcat 480
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<210> 220
<211> 531
<212> DNA
<213> Homo sapiens

<400> 220
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gcttttatct gccaagttat ccggcctctc atcaaccttc tcccctagcc tactggggga 480
tatccatctg ggtctgtctc tggtgtattg gtgtcaagtg gccaagcgtc a 531

<210> 221
<211> 530
<212> DNA
<213> Homo sapiens

<400> 221
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tcctatatgc agtctgttgt gaccaaaatg tgtcaagtgg ccaagcgtca 530

<210> 222
<211> 578
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 308, 381, 561, 570, 573
<223> n = A,T,C or G

<400> 222
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aaggcagttg tatgagtttt agctgcggca cttcgagacc tctgagccca cctccttcag 180
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gtttgctctt tggagtggga naccactacn tcnataca 578

<210> 223
<211> 578
<212> DNA
<213> Homo sapiens

<400> 223
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gaagcctttc cttcacccag cggagcaact tgattttcta caacttccct catcagagcc 540
acaagagtat gggatatgga gaccactacg tcgataca 578

<210> 224
<211> 345
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13
<223> n = A,T,C or G

<400> 224
tgtatcgacg tantggtctc ccaaggtgct gggattgcag gcatgagcca ccactcccag 60
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aaaagtcttt tcaatctaca tggttaaata atgatagcct gggaaataaa tagaaatttt 180
ttctttcatc tttaggttga ataaagaaac agaaaaaata gaacatactg aaaataatct 240
aagttccaac catagaagaa ctgcagaaga aatgaagaaa gtgatgatga tttagatttt 300
gatattgatt tagaagacac aggaggagac cactacgtcg ataca 345

<210> 225
<211> 347
<212> DNA

<213> Homo sapiens

<400> 225
tgtatcgacg tagtggtctc caaactgagg tatgtgtgcc actagcacac aaagccttcc 60
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tgactctgat acgttgttct gatgtctaaa gagctccaga acaccaaagg gacaattcag 300
aatgctggtg tataacagac tccaatggag accactacgt cgataca 347

<210> 226
<211> 281
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 6, 11
<223> n = A,T,C or G

<400> 226
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aaattaaatc ttgtcatgac aagtctggaa ttcctgatga ggttttacaa agtattttgg 180
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gagtggattt acacacctca ggagaccact acgtcgatac a 281

<210> 227
<211> 3646
<212> DNA
<213> Homo sapiens

<400> 227
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<210> 228
<211> 419
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 402
<223> n = A,T,C or G

<400> 228

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ttcgcatgta tggaaactgc acgtacagga atgaagaatg agactgtgtg gtgtttaatg 300
agctgcaaat actaatttta tcctgaaagt tttgaagagt taactaaaaa gtatttttta 360
gtaaggaaat aaccctacat ttcagggtta ttgtttgttt anatattgaa ggtgcccaa 419

<210> 229
<211> 148
<212> DNA
<213> Homo sapiens

<400> 229
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ttgtttaagt gagttaatat attaaggata aagggagcca ggtttttga ctgttggaga 120
aggaaattac agatattgaa ggtcccaa 148

<210> 230
<211> 257
<212> DNA
<213> Homo sapiens

<400> 230
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ttgtttgtaa ctcgaaggat aaatgcttga gaggatggat accccattct ccatgatgta 180
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<210> 231
<211> 260
<212> DNA
<213> Homo sapiens

<400> 231
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aagtccatgg taccctctta 260

<210> 232
<211> 596
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 437, 440, 461, 536, 541, 565, 580, 587, 590, 595
<223> n = A,T,C or G

<400> 232
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atctgtgcac tgttggtggg aatgtaaaaa aggtgtggcc actatgggta acagcatgaa 180

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<210> 233
<211> 96
<212> DNA
<213> Homo sapiens

<400> 233
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taaggcaaga ggagcgttgg taaggcaaga ggagca 96

<210> 234
<211> 313
<212> DNA
<213> Homo sapiens

<400> 234
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gctcgactta caa 313

<210> 235
<211> 550
<212> DNA
<213> Homo sapiens

<400> 235
aacgaggaca gatccttaaa aagaatgttg agtgaaaaaa gtagaaaata agataatctc 60
caaagtccag tagcattatt taaacatttt taaaaaatac actgataaaa attttgtaca 120
tttcccaaaa atacatatgg aagcacagca gcatgaatgc ctatgggrtt gaggataggg 180
gttgggagta gggatgggga taaaggggga aaataaaacc agagaggagt cttacacatt 240
tcatgaacca aggagtataa ttatttcaac tatttgtacc wgaagtccag aaagagtgga 300
ggcagaaggg ggagaagagg gcgaagaaac gtttttggga gaggggtccc asaagagaga 360
ttttcgcgat gtggcgctac atacgttttt ccaggatgcc ttaagctctg caccctattt 420
ttctcatcac taatattaga ttaaaccctt tgaagacagc gtctgtggtt tctctacttc 480
agctttccct ccgtgtcttg cacacagtag ctgttttaca agggttgaac tgactgaagt 540
gagattattc 550

<210> 236
<211> 325
<212> DNA
<213> Homo sapiens

<400> 236
tagactgact catgtcccct accagagtag ctagaattaa tagcacaagc ctctacaccc 60

aggaactcac tattgaatac ataaatggaa tttattcagc cttaaaaagt ttggaaggaa 120
attctgacat atgctaaaac atggatgaac cttgaagact ttatgataag taaaagaagc 180
cagtcataaa aggaaaaata ttgcatgatt ccacttatat gaggtaccta gagtagtcaa 240
tttcatagaa acacaaaata gaatggtgtt tgccagggct tttgaggaaa agggaatgac 300
aagttagggg acatgagtca gtcta 325

<210> 237
<211> 373
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 355
<223> n = A,T,C or G

<400> 237
tagactgact catgtcccct atctactcaa catttccact tgaagtctga taggcatctc 60
agacttatct tgtcccaaag caaactcttt atttcttttc atcctagtct ttatttcttg 120
tgctgtctta cccatctcaa aagagtgcca aaatccacca agttgctgaa acagaaatct 180
aagaaatatc cttgattctt ctttttccca tctacttcac ttctaattca ttagtaaata 240
atctgtttca gaaaaccaaa cacctcatgt tctcactcat aaggggggagt tgaacaatga 300
gaacacacag acacagggag gggaacatca cacaccacgg cccgtcaggg agtangggac 360
atgagtcagt cta 373

<210> 238
<211> 492
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 272, 310, 380, 435, 474, 484, 488
<223> n = A,T,C or G

<400> 238
tagactgact catgtcccct ataatgctcc caggcatcag aaagcatctc aaactggagc 60
tgacaccatg gcagaggttt caggtaagtc acaaaagggg tcctaaagaa tttgccctca 120
atatcagagt gattagaaga agtggacaga gctacccaag ttaaacatat gcgagataaa 180
aaaaatatgg cacttgtgaa cacacactac aggaggaaaa taaggaacat aatagcatat 240
tgtgctatta tgatgatgaa gaacctctct anaagaaaac ataaccaaag aaacaaagaa 300
aattcctgcn aatgtttaat gctatagaag aaattaacaa aaacatatat tcaatgaatt 360
cagaaaagtt agcaggtcan aagaaaacaa atcaaagacc agaataatcc cattttagat 420
tgtcgagtaa actanaacag aaagaatacc actggaaatt gaattcctac gtangggaca 480
tgantcantc ta 492

<210> 239
<211> 482
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 245

<223> n = A,T,C or G

<400> 239
tggaaagtat ttaatgatgg gcaacttgct gtttacttcc tacatatccc atcatcttct 60
gtatttttt aaataacttt tttttggatt tttaaagtaa ccttattctg agaggtaaca 120
tggattacat acttctaagc cattaggaga ctctatgtta aaccaaaagg aaatgttact 180
agatcttcat ttgatcaata ggatgtgata atcatcatct ttctgctcta atggaaaagt 240
actanaaaca tggaaccata atcttagatg aacaacgtta gaatttgcac taattctacg 300
gaatttcagt aattcggcaa atgtcgggca gtgacacaac atttcatgac ggggacgcat 360
ctaccaactt ctggcgataa gggccaccct tccctctgta cttacagtcc catttcatac 420
acagtctttg attaaatatt cacatttttt ctctacctaa agaccttcaa gaccagtacg 480
ta 482

<210> 240
<211> 519
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 491
<223> n = A,T,C or G

<400> 240
tgtatcgacg tagtggtctc cccatgtgat agtctgaaat atagcctcat gggatgagag 60
gctgtgcccc agcccgacac ccgtaaaggg tctgtgctga ggtggattag taaaagagga 120
aagccttgca gttgagatag aggaagggca ctgtctcctg cctgcccctg ggaactgaat 180
gtctcggtat aaaacccgat tgtacatttg ttcaattctg agataggaga aaaaccaccc 240
tatggcggga ggcgagacat gttggcagca atgctgcctt gttatgcttt actccacaga 300
tgtttgggcg gagggaaaca taaatctggc ctacgtgcac atccaggcat agtacctccc 360
tttgaactta attatgacac agattccttt gctcacatgt ttttttgctg accttctcct 420
tattatcacc ctgctctcct accgcattcc ttgtgctgag ataatgaaaa taatatcaat 480
aaaaacttga nggaactcgg agaccactac gtcgataca 519

<210> 241
<211> 771
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 304, 402, 442, 463, 510, 541, 550, 567, 571, 596, 617, 624,
644, 648, 652, 667, 682, 686, 719, 722, 729, 732, 751, 752,
757, 758, 760, 763, 766, 769
<223> n = A,T,C or G

<400> 241
tgtatcgacg tagtggtctc cactcccgcc ttgacggggc tgctatctgc cttccaggcc 60
actgtcacgg ctcccgggta gaagtcactt atgagacaca ccagtgtggc cttgttggct 120
tgaagctcct cagaggaggg tgggaacaga gtgaccgagg gggcagcctt gggctgacct 180
aggacggtca gcttggtccc tccgccaaac acgagagtgc tgctgcttgt atatgagctg 240
cagtaataat cagcctcgtc ctcagcctgg agcccagaga tggtcaggga ggccgtgttg 300
ccanacttgg agccagagaa gcgattagaa acccctgagg gccgattacc gacctcataa 360
atcatgaatt tgggggcttt gcctgggtgc tgttggtacc angagacatt attataacca 420

ccaacgtcac tgctggttcc antgcaggga aaatggttga tcnaactgtc caagaaaacc 480
actacgtcca taccaatcca ctaattgccn gccgcctgca ggttcaacca tattggggaa 540
naactccccn ccgccgtttg ggattgncat naacctttga aattttttcc tattanttgt 600
ccccctaaaa taaaccnttg ggcnttaatc cattgggtcc atancttntt tncccggttt 660
ttaaaanttg tttatcccgc cncccnattt cccccccaac tttccaaaac ccgaaaccnt 720
tnaaatttnt tnaaaccctg gggggttccc nnaattnnan ttnaanctnc c 771

<210> 242
<211> 167
<212> DNA
<213> Homo sapiens

<400> 242
tgggcacctt caatatcggg ctcatcgata acatcacgct gctgatgctg ctgttgctgg 60
tcctctctag gaacctctgg attttcaaat tctttgagga attcatccaa attatctgcc 120
tctcctcctt tcctcctttt tctaaggtct tctggtacaa gcggtca 167

<210> 243
<211> 338
<212> DNA
<213> Homo sapiens

<400> 243
ttgggcacct tcaatatcta ctgatctaaa tagtgtggtt tgaggcctct tgttcctggc 60
taaaaatcct tggcaagagt caatctccac tttacaatag aggtaaaaat cttacaatgg 120
atattcttga caaagctagc atagagacag caattttaca caaggtattt ttcacctgtt 180
taataacagt ggttttccta cacccatagg gtgccaccaa gggaggagtg cacagttgca 240
gaaacaaatt aagatactga agacaacact acttaccatt tcccgtatag ctaaccacca 300
gttcaactgt acatgtatgt tcttatgggc aatcaaga 338

<210> 244
<211> 346
<212> DNA
<213> Homo sapiens

<400> 244
tttttggctc ccatacagca cactctcatg ggaaatgtct gttctaaggt caacccataa 60
tgcaaaaatc atcaatatac ttgaagatcc ccgtgtaagg tacaatgtat ttaatattat 120
cactgataca attgatccaa taccagtttt agtctggcat tgaatcaaat cactgttttt 180
gttgtataaa aagagaaata tttagcttat atttaagtac catattgtaa gaaaaaagat 240
gcttatcttt acatgctaaa atcatgatct gtacattggt gcagtgaata ttactgtaaa 300
agggaagaag gaatgaagac gagctaagga tattgaaggt gcccaa 346

<210> 245
<211> 521
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 252, 337, 434, 455, 466, 478, 494, 510, 516
<223> n = A,T,C or G

<400> 245

accaatccca cacggatact gagggacaag tatatcatcc catttcatcc ctacagcagc 60
aacttcatga ggcaggagtt attagtccca ttttacagaa gaggaaactg agacttaggg 120
agatcaagta atttgcccag gtcgcacaat tagtgataga gccagggctt gaagcgacgt 180
ctgtcttaag ccaatgaccc ctgcagatta ttagagcaac tgttctccac aacagtgtaa 240
gcctcttgct anaagctcag gtccacaagg gcagagattt ttgtctgttt tgctcattgc 300
tccttcccca ttgcttagag cagggtctgc cacgaancag gttctcaatg catagttatt 360
aaatgtatat aagagcaaac atatgttaca gagaactttc tgtatgcttg tcacttacat 420
gaatcacctg tganatgggt atgcttgttc cccantgttg cagatnaaga tattgaangt 480
gcccaaatca ctanttgcgg gcgcctgcan gtccancata t 521

<210> 246
<211> 482
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 464
<223> n = A,T,C or G

<400> 246
tggaaccaat ccaaataccc atcaatgata gactggataa agaaaatttg gcacatgttc 60
accatgaaat actatgcagc cataaaaaag gatgagttca tatcctttgc agggacatgg 120
atgaagctgg agaccatcat tctcagcaaa ctaacaaggg aacagaaaac caaacactgc 180
atgttctcac tcttaagtgg gagctgaaca atgagaacac atggacacag ggaggggaac 240
atcacacagt ggggcctgct ggtgggtagg ggtctagggg agggatagca ttaggagaaa 300
tacctaatgt agatgacggg ttgatgggtg cagcaaacca ccatgacacg tgtataccta 360
tgtaacaaac ctgcatgttc tgcacatgta ccccagaact taaagtgtta ataaaaaaat 420
taagaaaaaa gttaagtatg tcatagatac ataaaatatt gtanatattg aaggtgccca 480
aa 482

<210> 247
<211> 474
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 220, 255, 287, 312, 339, 374, 382, 403, 414, 426, 427, 428,
432, 433, 434, 435, 436, 465
<223> n = A,T,C or G

<400> 247
ttcgatacag gcacagagta agcagaaaaa tggctgtggt ttaaccaagt gagtacagtt 60
aagtgagaga ggggcagaga agacaagggc atatgcaggg ggtgattata acaggtggtt 120
gtgctgggaa gtgagggtac tcggggatga ggaacagtga aaaagtggca aaaagtggta 180
agatcagtga attgtacttc tccagaattt gatttctggn ggagtcaaat aactatccag 240
tttggggtat catanggcaa cagttgaggt ataggaggta gaagtcncag tgggataatt 300
gaggttatga anggtttggt actgactggt actgacaang tctgggttat gaccatggga 360
atgaatgact gtanaagcgt anaggatgaa actattccac ganaaagggg tccnaaaact 420
aaaaannnaa gnnnnnnggg aatattattt atgtggatat tgaangtgcc caaa 474

<210> 248
<211> 355

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 69, 87, 186, 192, 220, 227, 251, 278, 339, 346, 350
<223> n = A,T,C or G

<400> 248
ttcgatacag gcaaacatga actgcaggag ggtggtgacg atcatgatgt tgccgatggt 60
ccggatggnc acgaagacgc actggancac gtgcttacgt ccttttgctc tgttgatggc 120
cctgagggga cgcaggaccc ttatgaccct cagaatcttc acaacgggag atggcactgg 180
attgantccc antgacacca gagacacccc aaccaccagn atatcantat attgatgtag 240
ttcctgtaga nggccccctt gtggaggaaa gctccatnag ttggtcatct tcaacaggat 300
ctcaacagtt tccgatggct gtgatgggca tagtcatant taaccntgtn tcgaa 355

<210> 249
<211> 434
<212> DNA
<213> Homo sapiens

<400> 249
ttggattggt cctccaggag aacaagggga aaaaggtgac cgagggctcc ctggaactca 60
aggatctcca ggagcaaaag gggatggggg aattcctggt cctgctggtc ccttaggtcc 120
acctggtcct ccaggcttac caggtcctca aggcccaaag ggtaacaaag gctctactgg 180
acccgctggc cagaaaggtg acagtggtct tccagggcct cctgggcctc caggtccacc 240
tggtgaagtc attcagcctt taccaatctt gtcctccaaa aaaacgagaa gacatactga 300
aggcatgcaa gcagatgcag atgataatat tcttgattac tcggatggaa tggaagaaat 360
atttggttcc ctcaattccc tgaaacaaga catcgagcat atgaaatttc caatgggtac 420
tcagaccaat ccaa 434

<210> 250
<211> 430
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 301, 430
<223> n = A,T,C or G

<400> 250
tggattggtc acatggcaga gacaggattc caaggcagtg agaggaggat acaatgcttc 60
tcactagtta ttattattta ttttattttt gagatgaagt ctcgctttgt ctcccaggct 120
ggagagcggt ggtgcgatct tggctctctg caacccccgc ctcaagcaat tctcctgtct 180
tagcctcgcg ggtagatgga attacaggcg cccaccgcca tgcccaacta attttttttgt 240
gtcttcagta gagacagggt ttcgccatgt tgggcaggct ggtcttgaac tcctgacctc 300
nagtgatctg ccctcctcgg cctcacaaag tgctggaatt acaggcatgg gctgctgcac 360
ccagtcaact tctcactagt tatggcctta tcattttcac cacattctat tggcccaaaa 420
aaaaaaaaan 430

<210> 251
<211> 329
<212> DNA

<213> Homo sapiens

<400> 251
tggtactcca ccatyatggg gtcaaccgcc atcctcgccc tcctcctggc tgttctccaa 60
ggagtctgtg ccgaggtgca gctgrtgcag tctggagcag aggtgaaaaa gtccggggag 120
tctctgaaga tctcctgtaa gggttctgga tacaccttta agatctactg gatcgcctgg 180
gtgcgccagt tgcccgggaa aggcctggag tggatggggc tcatctttcc tgatgactct 240
gataccagat acagcccgtc cttccaaggc caggtcacca tctcagtcga taagtccatc 300
agcaccgcct atctgcagtg gagtaccaa 329

<210> 252
<211> 536
<212> DNA
<213> Homo sapiens

<400> 252
tggtactcca ctcagcccaa ccttaattaa gaattaagag ggaacctatt actattctcc 60
caggctcctc tgctctaacc aggcttctgg gacagtatta gaaaaggatg tctcaacaag 120
tatgtagatc ctgtactggc ctaagaagtt aaactgagaa tagcataaat cagaccaaac 180
ttaatggtcg ttgagacttg tgtcctggag cagctgggat aggaaaactt ttgggcagca 240
agaggaagaa ctgcctggaa gggggcatca tgttaaaaat tacaagggga acccacacca 300
ggccccttc ccagctctca gcctagagta ttagcatttc tcagctagag actcacaact 360
tccttgctta gaatgtgcca ccgggggggag tccctgtggg tgatgaggct ctcaagagtg 420
agagtggcat cctatcttct gtgtgcccac aggagcctgg cccgagactt agcaggtgaa 480
gtttctggtc caggctttgc ccttgactca ctatgtgacc tctggtggag taccaa 536

<210> 253
<211> 507
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 253
ntgttgcgat cccagtaact cgggaagctg aggcgggagg atcacctgag ctcaggaggt 60
tgaggccgca gtgagccggg accacgccac tacactccag cctggggcat agagtgagac 120
cctccaagac agaaaagaaa agaaaggaag ggaaagggaa agggaaaagg aaaaggaaaa 180
ggaaaaggaa aaggaaaaga caagacaaaa caagacttga atttggatct cctgacttca 240
attttatgtt ctttctacac cacaattcct ctgcttacta agatgataat ttagaaaccc 300
ctcgttccat tctttacagc aagctggaag tttggtcaag taattacaat aatagtaaca 360
aatttgaata ttatatgcca ggtgtttttc attcctgctc tcacttaatt ctcaccactc 420
tgatataaat acaattgctg ccgggtgtgg tggctcatgc ctgtaatccc ggcactttgg 480
gagaccgagg tgggcggats gcaacaa 507

<210> 254
<211> 222
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 167
<223> n = A,T,C or G

<400> 254
ttggattggt cactgtgagg aagccaaatc ggatccgaga gtctttttct aaaggccagt 60
actggccaca ctttctcctg ccgccttcct caaagctgaa gacacacaga gcaaggcgct 120
tctgttttac tccccaatgg taactccaaa ccatagatgg ttagctnccc tgctcatctt 180
tccacatccc tgctattcag tatagtccgt ggaccaatcc aa 222

<210> 255
<211> 463
<212> DNA
<213> Homo sapiens

<400> 255
tgttgcgatc cataaatgct gaaatggaaa taaacaacat gatgagggag gattaagttg 60
gggagggagc acattaaggt ggccatgaag tttgttggaa gaagtgactt ttgaacaagg 120
ccttggtgtt aagagctgat gagagtgtcc cagacagagg ggccactggt acaatagacg 180
agatgggaga gggcttggaa ggtgtgcgaa ataggaagga gtttgttctg gtatgagtct 240
agtgaacaca gaggcgagag gccctggtgg gtgcagctgg agagttatgc agaataacat 300
taggccctgt gggggactgt agactgtcag caataatcca cagtttggat tttattctaa 360
gagtgatggg aagccgtgga aaggggggtta agcaaggagt gaaattatca gatttacagt 420
gataaaaata aattggtctg gctactgggg aaaaaaaaaa aaa 463

<210> 256
<211> 262
<212> DNA
<213> Homo sapiens

<400> 256
ttggattggt caacctgctc aactctacyt ttcctccttc ttcctaaaaa attaatgaat 60
ccaatacatt aatgccaaaa cccttgggtt ttatcaatat ttctgttaaa aagtattatc 120
cagaactgga cataatacta cataataata cataacaacc ccttcatctg gatgcaaaca 180
tctattaata tagcttaaga tcactttcac tttacagaag caacatcctg ttgatgttat 240
tttgatgttt ggaccaatcc aa 262

<210> 257
<211> 461
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 25, 32, 38, 71, 72
<223> n = A,T,C or G

<400> 257
gnggnnnnnn nnncaattcg actcngttcc cntggtancc ggtcgacatg gccgcgggat 60
taccgcttgt nnctgggggt gtatggggga ctatgaccgc ttgtagctgg gggtgtatgg 120
gggactatga ccgcttgtag mtggkggtgt atgggggact atgaccgctt gtcgggtggt 180
cggataaacc gacgcaaggg acgtgatcga agctgcgttc ccgctctttc gcatcggtag 240
ggatcatgga cagcaatatc cgcattcgyc tgaaggcgtt cgaccatcgc gtgctcgatc 300
aggcgaccgg cgacatcgcc gacaccgcac gccgtaccgg cgcgctcatc cgcggtccga 360
tcccgcttcc cacgcgcatc gagaagttca cggtcaaccg tggcccgcac gtcgacaaga 420

agtcgcgcga gcagttcgag gtgcgtacct acaagcggtc a 461

<210> 258
<211> 332
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 251
<223> n = A,T,C or G

<400> 258
tgaccgcttg tagctggggg tgtatggggg actacgaccg cttgtagctg ggggtgtatg 60
ggggactatg accgcttgta gctgggggtg tatgggggac tatgaccgct tgtagctggg 120
ggtgtatggg ggactaggac cgcttgtagc tgggggtgta tgggggacta tgaccgcttg 180
tagctggggg tgtatggggg actacgaccg cttgtagctg ggggtgtatg ggggactatg 240
accgcttgta nctgggggtg tatgggggac tatgaccgct tgtgctgcct gggggatggg 300
aggagagttg tggttgggga aaaaaaaaaa aa 332

<210> 259
<211> 291
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 141, 144, 167, 168, 171, 175, 194, 201, 202, 205, 209, 212,
235, 236, 245, 246, 258, 266, 268, 270, 273, 277, 285, 290
<223> n = A,T,C or G

<400> 259
taccgcttgt gaccgcttgt gaccgcttgt gaccgcttgt gaccgcttgt gaccgcttgt 60
gaccgcttgt gaccgcttgt gaccgcttgt gaccgcttgt gaccgcttgt gaccgcttgt 120
gaccgcttgt gaccgcttgt nacngggggt gtctggggga ctatgannga ntgtnactgg 180
gggtgtctgg gggnctatga nngantgtna cnggggggtgt ctgggggact atganngact 240
gtgcnncctg ggggatcnga ggagantngn ggntagngat ggttngggan a 291

<210> 260
<211> 238
<212> DNA
<213> Homo sapiens

<400> 260
taagagggta ctggttaaaa tacaggaaat ctggggtaat gaggcagaga accaggatac 60
tttgaggtca gggatgaaaa ctagaatttt tttctttttt tttgcctgag aaacttgctg 120
ctctgaagag gcccatgtat taattgcttt gatcttcctt ttcttacagc cctttcaagg 180
gcagagccct ccttatcctg aaggaatctt atccttagct atagtatgta ccctctta 238

<210> 261
<211> 746
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 662, 680, 685, 698, 707, 709, 734, 740, 741
<223> n = A,T,C or G

<400> 261
ttgggcacct tcaatatcaa tagctaacat ttattgagtg tttatcgtat cataaaacac 60
tgttctaagc ctttaaacgt actaattcat ttaatgctca taatcacttt agaaggtggg 120
tactagtatt agtctcattt acagatgcaa catgcaggca cagagaggtt aattaacttg 180
cccaaggtaa cacagctaag aaatagaaaa aatattgaat ctggaaagtt gggcttctgg 240
gtaacccaca gagtcttcaa tgagcctggg gcctcactca gtttgctttt acaaagcgaa 300
tgagtaacat cacttaattc agtgagtagg ccaaatggag gtcagctacg agtttctgct 360
gttcttgcag tggactgaca gatgtttaca acgtctggcc atcagtwaat ggactgatta 420
tcattgggaw gtgggtgggc tgaatgttgg ccagtgaagt ttattcawgc catattttta 480
tgtttaggat gacttttggc tggtcctagg gcaagctctg tctgscacgg aacacagaat 540
wacacaggga ccccctcaat ttctggtgtg gctagaacca tgaaccactg gttgggggaa 600
caagcggtca aaacctaagt gcggccggct ggcagggtcc acccatatgg ggaaaactcc 660
cnacgcgttt ggaatgcctn agctngaatt attctaanag ttgtccncnt aaaattagcc 720
tgggcgttaa tcangggtcn naagcc 746

<210> 262
<211> 588
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 485, 488, 489, 492, 493, 494, 496, 497, 498, 499, 502, 503, 504, 506, 521, 537, 550, 564
<223> n = A,T,C or G

<400> 262
tgaccgcttg tcatctcaca tggggtcctg cacgcttttg cctttgtagg aaacctgaca 60
tttgtctgtt tcttctttct cttttccttc ccatatcctc ctaatttacg tttgacttgt 120
ttgctgagga ggcaggagct agagactgct gtgagctcat aggggtggga agtttatcct 180
tcaagtcccg cccactcatc actgcttctc accttcccct gaccaggctt acaagtgggt 240
tcttgcctgc tttccctttg gacccaacaa gcccctgtaa tgagtgtgca tgactctgac 300
agctgtggac tcagggtcct tggctacagc tgccatgtaa aatatctcat ccagttctcg 360
caaattgtta aaataaccac atttcttaga ttccagtacc caaatcatgt ctttacgaac 420
tgctcctcac acccagaagt ggcacaataa ttcttgggga attattactt tttttttct 480
ctctnttnnc gnnngnnnng gnnngnccag gaattaccac nttggaagac ctggccngaa 540
tttattatan aggggagccg attnttttc ctaacacaaa gcgggtca 588

<210> 263
<211> 730
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 124, 510, 534, 559, 604, 605, 635, 711, 729
<223> n = A,T,C or G

<400> 263

tttttttttt tttggcctga gcaactgaaa ttatgaaatt tccatatact caaaagagta 60
agactgcaaa aagattaaat gtaaaagttg tcttgtatac agtaatgttt aagataccta 120
ttanatttat aaatggaaaa ttagggcatt tggatataca agttgaaaat tcaggagtga 180
ggttgggctg gctgggtata tactgaaaac tgtcagtaca cagatgacat ctaaaaccac 240
aaatctggtt ttattttagc agtgatatgt gtcactccca caaaagcctt cccaattggc 300
ctcagcatac acaacaagtc acctccccac agccctctac acataaacaa attccttagt 360
ttagttcagg aggaaatgcg ccctttttcct tccgctctag gtgaccgcaa ggcccagttc 420
tcgtcaccaa gatgttaagg gaagtctgcc aaagaggcat ctgaaaggaa ataaggggaa 480
tgggagtgac cacaaaggaa agccaaggan aaactttgga gaccgtttct agancctgg 540
catttcacaa caaaactcng gaacaaacct tgtctcatca atcatttaag cccttcgttt 600
ggannagact ttctgaactg ggcgctgaac ataancctca ttgaatgtct tcacagtctc 660
ccagctgaag gcacaccttg ggccagaagg ggaatcttcc aggtcctcaa nacagggctc 720
gccctttgnc 730

<210> 264
<211> 715
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 364, 451, 476, 494, 495, 515, 519, 524, 633, 635, 636, 645,
647, 649, 657, 692, 695, 701, 707, 710, 713
<223> n = A,T,C or G

<400> 264
tttttttttt tttggccagt atgatagtct ctaccactat attgaagctc ttaggtcatt 60
tacacttaat gtggttatag atgctgttga gcttacttct accaccttgc tatttctccc 120
gtctcttttt tgttcctttt ctcttctttt cctcccttat tttataattg aatttttag 180
gattctattt tatatagatt tatcagctat aacactttgt attcttttgt tttgtggttc 240
ttctgtcatt tcaatgtgca tcttaaactc atcacaatct attttcaaat aatatcatat 300
aaccttacat ataatgtaag aatctaccac catatatttc catttctccc ttccatccta 360
tgtntgtcat attttttcct ttatatatgt tttaaagaca taatagtata tgggaggttt 420
ttgcttaaaa tgtgatcaat attccttcaa ngaaacgtaa aaattcaaaa taaatntctg 480
tttattctca aatnnaccta atatttccta ccatntctna tacntttcaa gaatctgaag 540
gcattggttt tttccggctt aagaacctcc tctaaagcac tctaagcaga attaagtctt 600
ctgggagagg aattctccca agcttgggcc ttnanntgta ctccntnang gttaaanttt 660
ggccgggaaa tagaaattcc aagttaacag gntantttttt ntttttnttn tcncc 715

<210> 265
<211> 152
<212> DNA
<213> Homo sapiens

<400> 265
tttttttttt tttcccaaca caaagcacca ttatctttcc tcacaatttt caacatagtt 60
tgattcccat gaagaggtta tgatttctaa agaaaacatg gctactatac tatcaatcag 120
ggttaaatct ttttttttttg agacggagtt ta 152

<210> 266
<211> 193
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 180
<223> n = A,T,C or G

<400> 266
taaactccgt ccccttctta atcaatatgg aggctaccca ctccacatta ccttcttttc 60
aagggactgt ttccgtaact gttgtgggta ttcacgacca ggcttctaaa cctcttaaaa 120
ctccccaatt ctggtgccaa cttggacaac atgctttttt ttttttttt ttttttttn 180
gagacggagt tta 193

<210> 267
<211> 460
<212> DNA
<213> Homo sapiens

<400> 267
tgttgcgatc ccttaagcat gggtgctatt aaaaaaatgg tggagaagaa aatacctgga 60
atttacgtct tatctttaga gattgggaag accctgatgg aggacgtgga gaacagcttc 120
ttcttgaatg tcaattccca agtaacaaca gtgtgtcagg cacttgctaa ggatcctaaa 180
ttgcagcaag gctacaatgc tatgggattc tcccagggag gccaatttct gagggcagtg 240
gctcagagat gcccttcacc tcccatgatc aatctgatct cggttggggg acaacatcaa 300
ggtgtttttg gactccctcg atgcccagga gagagctctc acatctgtga cttcatccga 360
aaaacactga atgctggggc gtactccaaa gttgttcagg aacgcctcgt gcaagccgaa 420
tactggcatg acccataaaa ggaggatgtg gatcgcaaca 460

<210> 268
<211> 533
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 450, 470
<223> n = A,T,C or G

<400> 268
tgttgcgatc cgttgataga atagcgacgt ggtaatgagt gcatggcacg cctccgactt 60
accttcgccc gtggggaccc cgagtacgtc tacggcgtcg tcacttagag taccctctgg 120
acgcccgggc gcgttcgatt taccggaagc gcgagctgca gtgggcttgc gcccccggcc 180
aaattctttg gggggtttaa ggccgcgggg aatttgaggt atctctatca gtatgtagcc 240
aagttggaac agtcgccatt cccgaaatcg ctttctttga atccgcaccg cctccagcat 300
tgcctcattc atcaacctga aggcacgcat aagtgacggt tgtgtcttca gcagctccac 360
tccataacta gcgcgctcga cctcgtcttc gtacgcgcca ggtccgtgcg tgcgaattcc 420
caactccggt gagttgcgca tttcaagttn cgaaactgtt cgcctccacn atttggcatg 480
ttcacgcatg acacggaata aactcgtcca gtaccgggaa tgggatcgca aca 533

<210> 269
<211> 50
<212> DNA
<213> Homo sapiens

<400> 269
ttttttttttt ttcgcctgaa ttagctacag atcctcctca caagcggtca 50

<210> 270
<211> 519
<212> DNA
<213> Homo sapiens

<400> 270
tgttgcgatc caaataaccc accagcttct tgcacacttc gcagaagcca ccgtcctttg 60
gctgagtcac gtgaacggtc agtgcaagca gccgcgtgcc agagcagagg tgcagcatgc 120
tgcacaccag ctcagggctg acctcctcca gcaggatgga caggatggag ctgccgtacg 180
tgtccaccac ctcctggcac tcttccgaca gggacttcgg cagcttcgag cacattttgt 240
caaaagcgtc gagtatttct ttctcagtct tgttgttgtc aatcagcttg gtcacctcct 300
tcaccaggaa ttcacacacc tcacagtaaa catcagactt tgctgggacc tcgtgcttct 360
taatgggctc caccagttcc agggcaggga tgacattctt ggaggccact ttggcgggga 420
ccagagtctg catgggcatc tctttcacct catcacagaa cccaaccagc gcacagatct 480
ccttgggttg catgtgcatc atcatctggg atcgcaaca 519

<210> 271
<211> 457
<212> DNA
<213> Homo sapiens

<400> 271
ttttttttttt ttcgggcggc gaccggacgt gcactcctcc agtagcggct gcacgtcgtg 60
ccaatggccc gctatgagga ggtgagcgtg tccggcttcg aggagttcca ccgggccgtg 120
gaacagcaca atggcaagac cattttcgcc tactttacgg gttctaagga cgccgggggg 180
aaaagctggt gccccgactg cgtgcaggct gaaccagtcg tacgagaggg gctgaagcac 240
attagtgaag gatgtgtgtt catctactgc caagtaggag aagagcctta ttggaaagat 300
ccaaataatg acttcagaaa aaacttgaaa gtaacagcag tgcctacact acttaagtat 360
ggaacacctc aaaaactggt agaatctgag tgtcttcagg ccaacctggt ggaaatgttg 420
ttctctgaag attaagattt taggatggca atcaaga 457

<210> 272
<211> 102
<212> DNA
<213> Homo sapiens

<400> 272
ttttttttttt ttgggcaaca acctgaatac cttttcaagg ctctggcttg ggctcaagcc 60
cgcaggggaa atgcaactgg ccaggtcaca gggcaatcaa ga 102

<210> 273
<211> 455
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 380, 415, 454
<223> n = A,T,C or G

<400> 273
ttttttttttt ttggcaatca acaggtttaa gtcttcggcc gaagttaatc tcgtgttttt 60
ggcaatcaac aggtttaagt cttcggccga agttaatctc gtgtttttgg caatcaacag 120

gtttaagtct tcggccgaag ttaatctcgt gtttttggca atcaacaggt ttaagtcttc 180
ggccgaagtt aatctcgtgt ttttggcaat caacaggttt aagtcttcgg ccgaagttaa 240
tctcgtgttt ttggcaatca acaggtttaa gtcttcggcc gaagttaatc tcgtgttttt 300
ggcaatcaag aggtttaagt cttcggccga agttaatctc gtgtttttgg caatcaacag 360
gtttaagtct tcggccgaan ttaatctcgt gtttttggca atcaacaggt ttaantcttc 420
ggccgaagtt aatctcgtgt ttttggcaat caana 455

<210> 274
<211> 461
<212> DNA
<213> Homo sapiens

<400> 274
ttttttttttt ttggccaata cccttgatga acatcaatgt gaaaatcctc ggtaaaatac 60
tggcaaacca aatccagcag cacatcaaaa agcttatcca ccatgatcaa gtgggcttca 120
tccctgggat gcaaggctgg ttcaacataa gaaaatcaat aaatgtaatc catcacataa 180
acagaaccaa agacaaaaac cacatgatta tctcaataga tgcagaaaag gccttggaca 240
aattcaacag cccttcatgc taaacactct taataaacta gatattgatg gaatgtatct 300
caaaataata agagctattt atgacaaacc cacagccaat atcatactga atgggcaaag 360
actggaagca ttccctttga aaactggcac aagacaagga tgccctctct caccgctcct 420
attcaacata gtattggaag ttctggccag ggcaatcaag a 461

<210> 275
<211> 729
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 164, 193, 207, 215, 216, 220, 223, 241, 244, 254, 269, 271,
275, 290, 295, 298, 309, 318, 325, 326, 331, 352, 380, 401,
411, 420, 424, 426, 431, 433, 435, 438, 440, 442, 443, 448,
453, 464, 465, 468, 474, 475, 481, 487, 491, 503, 516
<223> n = A,T,C or G

<221> misc_feature
<222> 519, 530, 531, 542, 547, 549, 559, 561, 564, 582, 586, 587,
588, 589, 592, 595, 612, 614, 620, 631, 632, 635, 636, 644,
646, 649, 650, 651, 655, 657, 660, 661, 662, 663, 666, 672,
673, 674, 682, 687, 691, 693, 697, 700, 701, 704, 705
<223> n = A,T,C or G

<221> misc_feature
<222> 713, 715, 717, 718, 722, 726, 727
<223> n = A,T,C or G

<400> 275
ttttttttttt ttggccaaca ccaagtcttc cacgtgggag gttttattat gttttacaac 60
catgaaaaca taggaaggtg gctgttacag caaacatttc agatagacga atcggccaag 120
ctccccaaac cccaccttca cagcctcttc cacacgtctc ccanagattg ttgtccttca 180
cttgcaaatt canggatgtt ggaagtngac atttnnagtn gcnggaaccc catcagtgaa 240
ncantaagca gaantacgat gactttgana nacanctgat gaagaacacn ctacnganaa 300
ccctttctnt cgtgttanga tctcnngtcc ntcactaatg cggccccctg cnggtccacc 360
atttgggaga actccccccn cgttggatcc ccccttgagt ntcccattct ngtcccccan 420

accngncttg ngngncantn cnncctcnca ccntgtttcc ctgnngtnaa aatnngtttt 480
nccgccnccc naattcccac ccnaatcaca gcgaanccng aaggccttcn naagtgttta 540
angcccngng gtttcctcnt ntanttgcag cctaccctcc cncttnnnnt tncgngttgg 600
tcgcgccctg gncncgcctn gttcctcttt nnggnnacaa cctngntcnn nggcncntcn 660
nnnctnttcc tnnnactagc tngcctntcc ncnccgnggn ncanngcaca ttncncnnac 720
tntgtnncc 729

<210> 276
<211> 339
<212> DNA
<213> Homo sapiens

<400> 276
tgacctgaca tgtagtagat acttaataaa tatttgtgga atgaatggat gaagtggagt 60
tacagagaaa aatagaaaag tacaaattgt tgtcagtgtt ttgaaggaaa attatgatct 120
ttcccaaagt tctgacttca ttctaagaca gggttagtat ctccatacat aattttactt 180
gcttttgaaa atcaaatgag ataatctatt tagattgata atttatttag actggctata 240
aactattaag tgctagcaaa tatacatttt aatctcattt tccacctctt gtgatatagc 300
tatgtaggtg ttgactttaa tggatgtcag gtcaatccc 339

<210> 277
<211> 664
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 267, 534, 590, 601, 646, 657
<223> n = A,T,C or G

<400> 277
tgacctgaca tccataacaa aatctttctc cattatattc ttctagggga atttcttgaa 60
aagcatccaa aggaaacaaa tgatggtaag accgtgccaa gtggggagca gacaccaaag 120
taagaccaca gattttacat tcaacaggta gctcacagta ctttgcccga cactgtgggc 180
agaaatagcc tcctaatgta agccctggct cagtattgcc atccaaatgc gccatgctga 240
aagagggttt tgcatcctgg tcagatnaag aagcaatggt gtgctgagga aatcccatac 300
gaataagtga gcattcagaa cttgagctag caggaggagg actaagatga tgtgtgagca 360
actctttgta atggctttca tctaaaataa catggtacgt gccaccagtt tcacgagcaa 420
gtacagtgca aacgcgaact tctgcagaca atccaataac agatactcta attttagctg 480
cctttagggt cttgattaaa tcataaatat tagatggatc gcaagttgta aggntgctaa 540
aagatgatta gtacttctcg acttgtatgt ccaggcatgt tgttttaaan tctgccttag 600
nccctgctta ggggaatttt taaagaagat ggctctccat gttcanggtc aatcacnaat 660
tgcc 664

<210> 278
<211> 452
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 430
<223> n = A,T,C or G

<400> 278
tgacctgaca ttgaggaaga gcacacacct ctgaaattcc ttaggttcag aagggcattt 60
gacacagagt gggcctctga taattcatga aatgcattct gaagtcatcc agaatggagg 120
ctgcaatctg ctgtgctttg ggggttgcct cactgtgctc ctggatatca cacaaaagct 180
gcaatccttc ttcttcaact aacattttgc agtatttgct gggattttta ctgcagacat 240
gatacatagc ccatagtgcc cagagctgaa cctctggttg agagaagttg ccaaggagcg 300
ggaaaaatgt cttgaaagat ctataggtca ccaatgctgt catcttacaa cttgaacttg 360
gccaattctg tatggttgca tgcagatctt ggagaagagt acgcctctgg aagtcacggg 420
atatccaaan ctgtctgtca gatgtcaggt ca 452

<210> 279
<211> 274
<212> DNA
<213> Homo sapiens

<400> 279
ttttttttt ttcggcaagg caaatttact tctgcaaaag ggtgctgctt gcacttttgg 60
ccactgcgag agcacaccaa acaaagtagg gaaggggttt ttatccctaa cgcggttatt 120
ccctggttct gtgtcgtgtc cccattggct ggagtcagac tgcacaatct acactgaccc 180
aactggctac tgtttaaaat tgaatatgaa taattaggta ggaaggggga ggctgtttgt 240
tacggtacaa gacgtgtttg ggcatgtcag gtca 274

<210> 280
<211> 272
<212> DNA
<213> Homo sapiens

<400> 280
tacctgacat ggagaaataa cttgtagtat tttgcgtgca atggaatact atatgagggt 60
gaaaatgaat gaactagcaa tgcgtgtatc aacatgaata aatccccaaa acataataat 120
gttgaatgga aaaggtgagt ttcagaagga tatatatgcc ctctaaatcc atttatgtaa 180
acctttaaaa aactacatta tttatggtca taagtccatc cagaaaatat ttaaaaacct 240
acatgggatt gataactact gatgtcaggt ca 272

<210> 281
<211> 431
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 339, 420, 430, 431
<223> n = A,T,C or G

<400> 281
ttttttttt ttggccaata gcatgattta aacattggaa aaagtcaaat gagcaatgcg 60
aatttttatg ttctcttgaa taatcaaaag agtaggcaac attggttcct cattcttgaa 120
tagcattaat cagaaaatat tgcatagcct ctagcctcct tagagtaggt gtgctctctc 180
aaatatatca tagtcccaca gtttatttca tgtatatttt ctgcctgaat cacatagaca 240
tttgaatttg caacgcctga tgtaaatata taaattctta ccaatcagaa acatagcaag 300
aaattcaggg acttggtcat yatcagggta tgacagcana tccctgtara aacactgata 360
cacactcaca cacgtatgca acgtggagat gtcgcyttww kkktwywcwm rmrycrwcgn 420
aatcacttan n 431

<210> 282
<211> 98
<212> DNA
<213> Homo sapiens

<400> 282
attcgattcg atgcttgagc ccaggagttc aagactgcag tgagccactg cacttcaggc 60
tggacaacag agcgagtccc tgtgccaaaa aaaaaaaa 98

<210> 283
<211> 764
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 372, 374, 379, 380, 381, 382, 384, 387, 389, 392, 402, 409,
411, 419, 421, 432, 440, 447, 452, 457, 466, 470, 471, 480,
483, 492, 503, 506, 510, 512, 518, 520, 521, 524, 531, 534,
536, 542, 545, 547, 550, 552, 553, 562, 566, 567, 575
<223> n = A,T,C or G

<221> misc_feature
<222> 580, 581, 584, 586, 587, 595, 598, 601, 603, 604, 606, 624,
629, 630, 646, 651, 652, 653, 656, 659, 664, 665, 681, 691,
700, 706, 709, 721, 724, 731, 732, 737, 741, 744, 745, 750,
753, 754, 758
<223> n = A,T,C or G

<400> 283
ttttttttttt ttcgcaagca cgtgcacttt attgaatgac actgtagaca ggtgtgtggg 60
tataaactgc tgtatctagg ggcaggacca agggggcagg ggcaacagcc ccagcgtgca 120
gggccascat tgcacagtgg astgcaaagg ttgcaggcta tgggcggcta ctavtaaccc 180
cgtttttcct gtattatctg taacataata tggtagactg tcacagagcc gaatwccart 240
hacasgatga atccaawggt caygaggatg cccasaatca gggcccasat sttcaggcac 300
ttggcggtgg gggcatasgc ctgkgccccg gtcacgtcsc caaccwtcty cctgtcccta 360
cmcttgawtc cncncccttnn nntnccntna tntgcccgcc cncctcctng ngtcaaccng 420
natctgcact anctccctcn ccccttntgg antctcntcc ttcaantaan nttatccttn 480
acnccccccc cncctttccc ctnccncccn tnatcccngn nccnctatca ntcntnccct 540
cnctntnctn cnnatcgttc cncctnntaa ctacnctttn nacnannnct cactnatncc 600
ngnnanttct ttccttcccc cccnacgcnn tgcgtgcgcc cgtctngcct nnnctncgna 660
cccnnacttt atttaccttt ncaccctagc nctctacttn acccanccnc tcctacctcc 720
nggnccaccc nnccctnatc nctnnctctn tcnnctcntt cccc 764

<210> 284
<211> 157
<212> DNA
<213> Homo sapiens

<400> 284
caagtgtagg cacagtgatg aaagcctgga gcaaacacaa tctgtgggta attaacgttt 60
atttctcccc ttccaggaac gtcttgcatg gatgatcaaa gatcagctcc tggtcaacat 120
aaataagcta gtttaagata cgttccccta cacttga 157

<210> 285
<211> 150
<212> DNA
<213> Homo sapiens

<400> 285
attcgattgt actcagacaa caatatgcta agtggaagaa gtcagtcaca aaagaccaca 60
tactgtatga cttcatttac attaagtgtc cagaataggc aaatccgtag agacagaaag 120
tagatgagca gctgcctagg tctgagtaca 150

<210> 286
<211> 219
<212> DNA
<213> Homo sapiens

<400> 286
attcgatttt tttttttttg gccatgatga aattcttact ccctcagatt ttttgtctgg 60
ataaatgcaa gtctcaccac cagatgtgaa attacagtaa actttgaagg aatctcctga 120
gcaaccttgg ttaggatcaa tccaatattc accatctggg aagtcaggat ggctgagttg 180
caggtcttta caagttcggg ctggattggt ctgagtaca 219

<210> 287
<211> 196
<212> DNA
<213> Homo sapiens

<400> 287
attcgattct tgaggctacc aggagctagg agaagaggca tggaacaaat tttccctcat 60
atccatactc agaaggaacc aaccctgctg acaccttaat ttcagcttct ggcctctaga 120
actgtgagag agtacatttc tcttggttta agccaagaga atctgtcttt tggtacttta 180
tatcatagcc tcaaga 196

<210> 288
<211> 199
<212> DNA
<213> Homo sapiens

<400> 288
attcgatttc agtccagtcc cagaacccac attgtcaatt actactctgt araagattca 60
tttgttgaaa ttcattgagt aaaacattta tgatccctta atatatgcca attaccatgc 120
taggtactga agattcaagt gaccgagatg ctagcccttg ggttcaagtg atccctctcc 180
cagagtgcac tggactgaa 199

<210> 289
<211> 182
<212> DNA
<213> Homo sapiens

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<210> 291
<211> 1851
<212> DNA
<213> Homo sapiens

<400> 291
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<210> 292
<211> 1851
<212> DNA
<213> Homo sapiens

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cttttcccca tttagtatta tgttggctgt gggcttgtca taggtggttt ttattacttt 1800
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<210> 293
<211> 668
<212> DNA
<213> Homo sapiens

<400> 293
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accrtataag agcagtgctt tggccattaa tttatctttc attrtagaca gcrtagtgya 180
gagtggtatt tccatactca tctggaatat ttggatcagt gccatgttcc agcaacatta 240
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<210> 294
<211> 1512
<212> DNA
<213> Homo sapiens

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tgatctcgtg cc 1512

<210> 295
<211> 1853
<212> DNA
<213> Homo sapiens

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<211> 2184
<212> DNA
<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

<220>
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<222> 606
<223> n = A,T,C or G

<400> 297
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acctaattat ctaagacttt attttaaata ttgttatttt caaagaagca ttagagggta 1560
cagttttttt tttttaaatg cacttctggt aaatactttt gttgaaaaca ctgaatttgt 1620
aaaaggtaat acttactatt tttcaatttt tccctcctag gatttttttc ccctaatgaa 1680
tgtaagatgg caaaatttgc cctgaaatag gttttacatg aaaactccaa gaaaagttaa 1740
acatgtttca gtgaatagag atcctgctcc tttggcaagt tcctaaaaaa cagtaataga 1800
tacgaggtga tgcgcctgtc agtggcaagg tttaagatat ttctgatctc gtgcc 1855

<210> 298
<211> 1059
<212> DNA
<213> Homo sapiens

<400> 298
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ggtgcaagtg gtgctgccca ctgcttcccc tgctgcaggg gagcggcaag agcaacgtgg 120
gcgcttgrgg agactmcgat gacagygcct tcatggagcc caggtaccac gtccgtggag 180
aagatctgga caagctccac agagctgccc tggtggggta aagtccccag aaaggatctc 240
atcgtcatgc tcagggacac tgaygtgaac aagarggaca agcaaaagag gactgctcta 300
catctggcct ctgccaatgg gaattcagaa gtagtaaaac tcstgctgga cagacgatgt 360
caacttaatg tccttgacaa caaaaagagg acagctctga yaaaggccgt acaatgccag 420
gaagatgaat gtgcgttaat gttgctggaa catggcactg atccaaatat tccagatgag 480
tatggaaata ccactctrca ctaygctrtc tayaatgaag ataaattaat ggccaaagca 540
ctgctcttat ayggtgctga tatcgaatca aaaaacaagg tatagatcta ctaattttat 600
cttcaaaata ctgaaatgca ttcattttaa cattgacgtg tgtaagggcc agtcttccgt 660
atttggaagc tcaagcataa cttgaatgaa aatattttga aatgacctaa ttatctaaga 720
ctttatttta aatattgtta ttttcaaaga agcattagag ggtacagttt ttttttttta 780
aatgcacttc tggtaaatac ttttgttgaa aacactgaat ttgtaaaagg taatacttac 840
tatttttcaa tttttccctc ctaggatttt tttcccctaa tgaatgtaag atggcaaaat 900
ttgccctgaa ataggtttta catgaaaact ccaagaaaag ttaaacatgt ttcagtgaat 960
agagatcctg ctcctttggc aagttcctaa aaaacagtaa tagatacgag gtgatgcgcc 1020
tgtcagtggc aaggtttaag atatttctga tctcgtgcc 1059

<210> 299
<211> 329
<212> PRT
<213> Homo sapiens

<400> 299
Met Asp Ile Val Val Ser Gly Ser His Pro Leu Trp Val Asp Ser Phe
 1   5   10   15
Leu His Leu Ala Gly Ser Asp Leu Leu Ser Arg Ser Leu Met Ala Glu
            20   25   30
Glu Tyr Thr Ile Val His Ala Ser Phe Ile Ser Cys Ile Ser Ser Ser

```
        35                  40                  45
Leu Asp Gly Gln Gly Glu Arg Gln Glu Gln Arg Gly His Phe Trp Arg
    50                  55                  60
Pro Gln Arg Leu Leu Cys Glu Asp Ala Trp Glu Gln Glu Val Gln Val
65                  70                  75                  80
Val Leu Pro Leu Leu Pro Leu Leu Gln Gly Ser Gly Lys Ser Asn Val
                85                  90                  95
Val Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe Met Asp Pro Arg Tyr
            100                 105                 110
His Val His Gly Glu Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp
        115                 120                 125
Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp
    130                 135                 140
Val Asn Lys Arg Asp Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser
145                 150                 155                 160
Ala Asn Gly Asn Ser Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys
                165                 170                 175
Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala
            180                 185                 190
Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly
        195                 200                 205
Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr
    210                 215                 220
Ala Val Tyr Asn Glu Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr
225                 230                 235                 240
Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu
                245                 250                 255
Leu Gly Ile His Glu Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys
            260                 265                 270
Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu
        275                 280                 285
Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu
    290                 295                 300
Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu Glu Arg Arg Pro Glu
305                 310                 315                 320
Ser Met Leu Phe Leu Val Ile Ile Met
                325
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<210> 300
<211> 148
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3, 46, 69, 88, 124
<223> Xaa = Any Amino Acid

<400> 300

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Met Thr Xaa Pro Ser Trp Ser Pro Gly Thr Thr Ser Val Glu Lys Ile
 1               5                  10                  15
Trp Thr Ser Ser Thr Glu Leu Pro Trp Trp Gly Lys Val Pro Arg Lys
            20                  25                  30
```

Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Xaa Asp Lys
35 40 45
Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu
50 55 60
Val Val Lys Leu Xaa Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp
65 70 75 80
Asn Lys Lys Arg Thr Ala Leu Xaa Lys Ala Val Gln Cys Gln Glu Asp
85 90 95
Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro
100 105 110
Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Xaa Tyr Asn Glu Asp
115 120 125
Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser
130 135 140
Lys Asn Lys Val
145

<210> 301
<211> 1155
<212> DNA
<213> Homo sapiens

<400> 301
atggtggttg aggttgattc catgccggct gcctcttctg tgaagaagcc atttggtctc 60
aggagcaaga tgggcaagtg gtgctgccgt tgcttcccct gctgcaggga gagcggcaag 120
agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag 180
atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg 240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag 300
tggtgctgcc actgcttccc ctgctgcagg gggagcggca agagcaaggt gggcgcttgg 360
ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg 420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg 480
ctcagggaca ctgacgtgaa caagaaggac aagcaaaaga ggactgctct acatctggcc 540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat 600
gtccttgaca acaaaaagag gacagctctg ataaaggccg tacaatgcca ggaagatgaa 660
tgtgcgttaa tgttgctgga acatggcact gatccaaata ttccagatga gtatggaaat 720
accactctgc actacgctat ctataatgaa gataaattaa tggccaaagc actgctctta 780
tatggtgctg atatcgaatc aaaaaacaag catggcctca caccactgtt acttggtgta 840
catgagcaaa aacagcaagt cgtgaaattt ttaatcaaga aaaaagcgaa tttaaatgca 900
ctggatagat atggaaggac tgctctcata cttgctgtat gttgtggatc agcaagtata 960
gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac 1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaaa tgtctcaaga 1140
accagaaata aataa 1155

<210> 302
<211> 2000
<212> DNA
<213> Homo sapiens

<400> 302
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aggagcaaga tgggcaagtg gtgctgccgt tgcttcccct gctgcaggga gagcggcaag 120
agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag 180

atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg 240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag 300
tggtgctgcc actgcttccc ctgctgcagg gggagcggca agagcaaggt gggcgcttgg 360
ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg 420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg 480
ctcagggaca ctgacgtgaa caagaaggac aagcaaaaga ggactgctct acatctggcc 540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat 600
gtccttgaca acaaaaagag gacagctctg ataaaggccg tacaatgcca ggaagatgaa 660
tgtgcgttaa tgttgctgga acatggcact gatccaaata ttccagatga gtatggaaat 720
accactctgc actacgctat ctataatgaa gataaattaa tggccaaagc actgctctta 780
tatggtgctg atatcgaatc aaaaaacaag catggcctca caccactgtt acttggtgta 840
catgagcaaa aacagcaagt cgtgaaattt ttaatcaaga aaaaagcgaa tttaaatgca 900
ctggatagat atggaaggac tgctctcata cttgctgtat gttgtggatc agcaagtata 960
gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac 1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaca agacttaaag 1140
ctgacatcag aggaagagtc acaaaggttc aaaggcagtg aaaatagcca gccagagaaa 1200
atgtctcaag aaccagaaat aaataaggat ggtgatagag aggttgaaga agaaatgaag 1260
aagcatgaaa gtaataatgt gggattacta gaaaacctga ctaatggtgt cactgctggc 1320
aatggtgata atggattaat tcctcaaagg aagagcagaa cacctgaaaa tcagcaattt 1380
cctgacaacg aaagtgaaga gtatcacaga atttgcgaat tagtttctga ctacaaagaa 1440
aaacagatgc caaaatactc ttctgaaaac agcaacccag aacaagactt aaagctgaca 1500
tcagaggaag agtcacaaag gcttgagggc agtgaaaatg gccagccaga gctagaaaat 1560
tttatggcta tcgaagaaat gaagaagcac ggaagtactc atgtcggatt cccagaaaac 1620
ctgactaatg gtgccactgc tggcaatggt gatgatggat taattcctcc aaggaagagc 1680
agaacacctg aaagccagca atttcctgac actgagaatg aagagtatca cagtgacgaa 1740
caaaatgata ctcagaagca attttgtgaa gaacagaaca ctggaatatt acacgatgag 1800
attctgattc atgaagaaaa gcagatagaa gtggttgaaa aaatgaattc tgagctttct 1860
cttagttgta agaaagaaaa agacatcttg catgaaaata gtacgttgcg ggaagaaatt 1920
gccatgctaa gactggagct agacacaatg aaacatcaga gccagctaaa aaaaaaaaaa 1980
aaaaaaaaaa aaaaaaaaaa 2000

<210> 303
<211> 2040
<212> DNA
<213> Homo sapiens

<400> 303
atggtggttg aggttgattc catgccggct gcctcttctg tgaagaagcc atttggtctc 60
aggagcaaga tgggcaagtg gtgctgccgt tgcttcccct gctgcaggga gagcggcaag 120
agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag 180
atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg 240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag 300
tggtgctgcc actgcttccc ctgctgcagg gggagcggca agagcaaggt gggcgcttgg 360
ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg 420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg 480
ctcagggaca ctgacgtgaa caagaaggac aagcaaaaga ggactgctct acatctggcc 540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat 600
gtccttgaca acaaaaagag gacagctctg ataaaggccg tacaatgcca ggaagatgaa 660
tgtgcgttaa tgttgctgga acatggcact gatccaaata ttccagatga gtatggaaat 720
accactctgc actacgctat ctataatgaa gataaattaa tggccaaagc actgctctta 780
tatggtgctg atatcgaatc aaaaaacaag catggcctca caccactgtt acttggtgta 840
catgagcaaa aacagcaagt cgtgaaattt ttaatcaaga aaaaagcgaa tttaaatgca 900
ctggatagat atggaaggac tgctctcata cttgctgtat gttgtggatc agcaagtata 960

gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac 1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaca agacttaaag 1140
ctgacatcag aggaagagtc acaaaggttc aaaggcagtg aaaatagcca gccagagaaa 1200
atgtctcaag aaccagaaat aaataaggat ggtgatagag aggttgaaga agaaatgaag 1260
aagcatgaaa gtaataatgt gggattacta gaaaacctga ctaatggtgt cactgctggc 1320
aatggtgata atggattaat tcctcaaagg aagagcagaa cacctgaaaa tcagcaattt 1380
cctgacaacg aaagtgaaga gtatcacaga atttgcgaat tagtttctga ctacaaagaa 1440
aaacagatgc caaaatactc ttctgaaaac agcaacccag aacaagactt aaagctgaca 1500
tcagaggaag agtcacaaag gcttgagggc agtgaaaatg gccagccaga gaaaagatct 1560
caagaaccag aaataaataa ggatggtgat agagagctag aaaatttttat ggctatcgaa 1620
gaaatgaaga agcacggaag tactcatgtc ggattcccag aaaacctgac taatggtgcc 1680
actgctggca atggtgatga tggattaatt cctccaagga agagcagaac acctgaaagc 1740
cagcaatttc ctgacactga gaatgaagag tatcacagtg acgaacaaaa tgatactcag 1800
aagcaatttt gtgaagaaca gaacactgga atattacacg atgagattct gattcatgaa 1860
gaaaagcaga tagaagtggt tgaaaaaatg aattctgagc tttctcttag ttgtaagaaa 1920
gaaaaagaca tcttgcatga aaatagtacg ttgcgggaag aaattgccat gctaagactg 1980
gagctagaca caatgaaaca tcagagccag ctaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2040

<210> 304
<211> 384
<212> PRT
<213> Homo sapiens

<400> 304
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
 1   5   10   15
Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
            20   25   30
Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
        35   40   45
His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
    50   55   60
Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
65   70   75   80
Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
                85   90   95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
            100   105   110
Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
        115   120   125
Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
    130   135   140
Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145   150   155   160
Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
                165   170   175
Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
            180   185   190
Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
        195   200   205
Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
    210   215   220

```
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225                 230                 235                 240
Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
                245                 250                 255
Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
            260                 265                 270
Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
        275                 280                 285
Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
    290                 295                 300
Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305                 310                 315                 320
Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
                325                 330                 335
Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
            340                 345                 350
Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
        355                 360                 365
Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
    370                 375                 380


<210> 305
<211> 656
<212> PRT
<213> Homo sapiens

<400> 305
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
 1               5                  10                  15
Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
            20                  25                  30
Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
        35                  40                  45
His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
    50                  55                  60
Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
65                  70                  75                  80
Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
                85                  90                  95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
            100                 105                 110
Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
        115                 120                 125
Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
    130                 135                 140
Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145                 150                 155                 160
Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
                165                 170                 175
Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
            180                 185                 190
Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
        195                 200                 205
```

```
Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
    210                 215                 220
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225                 230                 235                 240
Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
                245                 250                 255
Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
            260                 265                 270
Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
        275                 280                 285
Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
    290                 295                 300
Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305                 310                 315                 320
Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
                325                 330                 335
Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
            340                 345                 350
Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
        355                 360                 365
Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu
    370                 375                 380
Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys
385                 390                 395                 400
Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu
                405                 410                 415
Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn
            420                 425                 430
Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro
        435                 440                 445
Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu
    450                 455                 460
Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu
465                 470                 475                 480
Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp
                485                 490                 495
Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu
            500                 505                 510
Asn Gly Gln Pro Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys
        515                 520                 525
Lys His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly
    530                 535                 540
Ala Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser
545                 550                 555                 560
Arg Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr
                565                 570                 575
His Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln
            580                 585                 590
Asn Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln
        595                 600                 605
Ile Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys
    610                 615                 620
Lys Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile
625                 630                 635                 640
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Ala Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu
645 650 655

<210> 306
<211> 671
<212> PRT
<213> Homo sapiens

<400> 306
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
1 5 10 15
Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
20 25 30
Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
35 40 45
His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
50 55 60
Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
65 70 75 80
Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
85 90 95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
100 105 110
Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
115 120 125
Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
130 135 140
Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145 150 155 160
Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
165 170 175
Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
180 185 190
Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
195 200 205
Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
210 215 220
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225 230 235 240
Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
245 250 255
Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
260 265 270
Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
275 280 285
Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
290 295 300
Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305 310 315 320
Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
325 330 335
Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
340 345 350

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Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
        355                 360                 365
Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp Leu Lys Leu Thr Ser Glu
    370                 375                 380
Glu Glu Ser Gln Arg Phe Lys Gly Ser Glu Asn Ser Gln Pro Glu Lys
385                 390                 395                 400
Met Ser Gln Glu Pro Glu Ile Asn Lys Asp Gly Asp Arg Glu Val Glu
                405                 410                 415
Glu Glu Met Lys Lys His Glu Ser Asn Asn Val Gly Leu Leu Glu Asn
            420                 425                 430
Leu Thr Asn Gly Val Thr Ala Gly Asn Gly Asp Asn Gly Leu Ile Pro
        435                 440                 445
Gln Arg Lys Ser Arg Thr Pro Glu Asn Gln Gln Phe Pro Asp Asn Glu
    450                 455                 460
Ser Glu Glu Tyr His Arg Ile Cys Glu Leu Val Ser Asp Tyr Lys Glu
465                 470                 475                 480
Lys Gln Met Pro Lys Tyr Ser Ser Glu Asn Ser Asn Pro Glu Gln Asp
                485                 490                 495
Leu Lys Leu Thr Ser Glu Glu Glu Ser Gln Arg Leu Glu Gly Ser Glu
            500                 505                 510
Asn Gly Gln Pro Glu Lys Arg Ser Gln Glu Pro Glu Ile Asn Lys Asp
        515                 520                 525
Gly Asp Arg Glu Leu Glu Asn Phe Met Ala Ile Glu Glu Met Lys Lys
    530                 535                 540
His Gly Ser Thr His Val Gly Phe Pro Glu Asn Leu Thr Asn Gly Ala
545                 550                 555                 560
Thr Ala Gly Asn Gly Asp Asp Gly Leu Ile Pro Pro Arg Lys Ser Arg
                565                 570                 575
Thr Pro Glu Ser Gln Gln Phe Pro Asp Thr Glu Asn Glu Glu Tyr His
            580                 585                 590
Ser Asp Glu Gln Asn Asp Thr Gln Lys Gln Phe Cys Glu Glu Gln Asn
        595                 600                 605
Thr Gly Ile Leu His Asp Glu Ile Leu Ile His Glu Glu Lys Gln Ile
    610                 615                 620
Glu Val Val Glu Lys Met Asn Ser Glu Leu Ser Leu Ser Cys Lys Lys
625                 630                 635                 640
Glu Lys Asp Ile Leu His Glu Asn Ser Thr Leu Arg Glu Glu Ile Ala
                645                 650                 655
Met Leu Arg Leu Glu Leu Asp Thr Met Lys His Gln Ser Gln Leu
            660                 665                 670
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<210> 307
<211> 800
<212> DNA
<213> Homo sapiens

<400> 307
atkagcttcc gcttctgaca acactagaga tccctcccct ccctcagggt atggccctcc 60
acttcatttt tggtacataa catctttata ggacaggggt aaaatcccaa tactaacagg 120
agaatgctta ggactctaac aggtttttga gaatgtgttg gtaagggcca ctcaatccaa 180
tttttcttgg tcctccttgt ggtctaggag gacaggcaag ggtgcagatt ttcaagaatg 240
catcagtaag ggccactaaa tccgaccttc ctcgttcctc cttgtggtct gggaggaaaa 300
ctagtgtttc tgttgctgtg tcagtgagca caactattcc gatcagcagg gtccagggac 360

cactgcaggt tcttgggcag ggggagaaac aaaacaaacc aaaaccatgg gcrgttttgt 420
ctttcagatg ggaaacactc aggcatcaac aggctcacct ttgaaatgca tcctaagcca 480
atgggacaaa tttgacccac aaaccctgga aaaagaggtg gctcattttt tttgcactat 540
ggcttggccc caacattctc tctctgatgg ggaaaaatgg ccacctgagg gaagtacaga 600
ttacaatact atcctgcagc ttgacctttt ctgtaagagg gaaggcaaat ggagtgaaat 660
accttatgtc caagctttct tttcattgaa ggagaataca ctatgcaaag cttgaaattt 720
acatcccaca ggaggacctc tcagcttacc cccatatcct agcctcccta tagctccccc 780
tcctattagt gataagcctc 800

<210> 308
<211> 102
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 3
<223> Xaa = Any Amino Acid

<400> 308
Met Gly Xaa Phe Val Phe Gln Met Gly Asn Thr Gln Ala Ser Thr Gly
1 5 10 15
Ser Pro Leu Lys Cys Ile Leu Ser Gln Trp Asp Lys Phe Asp Pro Gln
20 25 30
Thr Leu Glu Lys Glu Val Ala His Phe Phe Cys Thr Met Ala Trp Pro
35 40 45
Gln His Ser Leu Ser Asp Gly Glu Lys Trp Pro Pro Glu Gly Ser Thr
50 55 60
Asp Tyr Asn Thr Ile Leu Gln Leu Asp Leu Phe Cys Lys Arg Glu Gly
65 70 75 80
Lys Trp Ser Glu Ile Pro Tyr Val Gln Ala Phe Phe Ser Leu Lys Glu
85 90 95
Asn Thr Leu Cys Lys Ala
100

<210> 309
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in the lab

<400> 309
Leu Met Ala Glu Glu Tyr Thr Ile Val
1 5

<210> 310
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in the lab

<400> 310
Lys Leu Met Ala Lys Ala Leu Leu Leu
 1   5

<210> 311
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in the lab

<400> 311
Gly Leu Thr Pro Leu Leu Leu Gly Ile
 1   5

<210> 312
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Made in the lab

<400> 312
Lys Leu Val Leu Asp Arg Arg Cys Gln Leu
 1   5   10

<210> 313
<211> 1852
<212> DNA
<213> Homo sapiens

<400> 313
ggcacgagaa ttaaaaccct cagcaaaaca ggcatagaag ggacatacct taaagtaata 60
aaaaccacct atgacaagcc cacagccaac ataatactaa atggggaaaa gttagaagca 120
tttcctctga gaactgcaac aataaataca aggatgctgg attttgtcaa atgccttttc 180
tgtgtctgtt gagatgctta tgtgactttg cttttaattc tgtttatgtg attatcacat 240
ttattgactt gcctgtgtta gaccggaaga gctggggtgt ttctcaggag ccaccgtgtg 300
ctgcggcagc ttcgggataa cttgaggctg catcactggg gaagaaacac aytcctgtcc 360
gtggcgctga tggctgagga cagagcttca gtgtggcttc tctgcgactg gcttcttcgg 420
ggagttcttc cttcatagtt catccatatg gctccagagg aaaattatat tattttgtta 480
tggatgaaga gtattacgtt gtgcagatat actgcagtgt cttcatctct tgatgtgtga 540
ttgggtaggt tccaccatgt tgccgcagat gacatgattt cagtacctgt gtctggctga 600
aaagtgtttg tttgtgaatg gatattgtgg tttctggatc tcatcctctg tgggtggaca 660
gctttctcca ccttgctgga agtgacctgc tgtccagaag tttgatggct gaggagtata 720
ccatcgtgca tgcatctttc atttcctgca tttcttcctc cctggatgga caggggagc 780
ggcaagagca acgtgggcac ttctggagac cacaacgact cctctgtgaa gacgcttggg 840

```
agcaagaggt gcaagtggtg ctgccactgc ttcccctgct gcagggggag cggcaagagc 900
aacgtggtcg cttggggaga ctacgatgac agcgccttca tggatcccag gtaccacgtc 960
catggagaag atctggacaa gctccacaga gctgcctggt ggggtaaagt ccccagaaag 1020
gatctcatcg tcatgctcag ggacacggat gtgaacaaga gggacaagca aaagaggact 1080
gctctacatc tggcctctgc caatgggaat tcagaagtag taaaactcgt gctggacaga 1140
cgatgtcaac ttaatgtcct tgacaacaaa aagaggacag ctctgacaaa ggccgtacaa 1200
tgccaggaag atgaatgtgc gttaatgttg ctggaacatg gcactgatcc aaatattcca 1260
gatgagtatg gaaataccac tctacactat gctgtctaca atgaagataa attaatggcc 1320
aaagcactgc tcttatacgg tgctgatatc gaatcaaaaa acaagcatgg cctcacacca 1380
ctgctacttg gtatacatga gcaaaaacag caagtggtga aatttttaat caagaaaaaa 1440
gcgaatttaa atgcgctgga tagatatgga agaactgctc tcatacttgc tgtatgttgt 1500
ggatcagcaa gtatagtcag ccctctactt gagcaaaatg ttgatgtatc ttctcaagat 1560
ctggaaagac ggccagagag tatgctgttt ctagtcatca tcatgtaatt tgccagttac 1620
tttctgacta caaagaaaaa cagatgttaa aaatctcttc tgaaaacagc aatccagaac 1680
aagacttaaa gctgacatca gaggaagagt cacaaaggct taaaggaagt gaaaacagcc 1740
agccagagct agaagattta tggctattga agaagaatga agaacacgga agtactcatg 1800
tgggattccc agaaaacctg actaacggtg ccgctgctgg caatggtgat ga         1852
```

<210> 314
<211> 879
<212> DNA
<213> Homo sapiens

<400> 314

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atgcatcttt catttcctgc atttcttcct ccctggatgg acagggggag cggcaagagc 60
aacgtgggca cttctggaga ccacaacgac tcctctgtga agacgcttgg gagcaagagg 120
tgcaagtggt gctgccactg cttcccctgc tgcaggggga gcggcaagag caacgtggtc 180
gcttggggag actacgatga cagcgccttc atggatccca ggtaccacgt ccatggagaa 240
gatctggaca agctccacag agctgcctgg tggggtaaag tccccagaaa ggatctcatc 300
gtcatgctca gggacacgga tgtgaacaag agggacaagc aaaagaggac tgctctacat 360
ctggcctctg ccaatgggaa ttcagaagta gtaaaactcg tgctggacag acgatgtcaa 420
cttaatgtcc ttgacaacaa aaagaggaca gctctgacaa aggccgtaca atgccaggaa 480
gatgaatgtg cgttaatgtt gctggaacat ggcactgatc caaatattcc agatgagtat 540
ggaaatacca ctctacacta tgctgtctac aatgaagata aattaatggc caaagcactg 600
ctcttatacg gtgctgatat cgaatcaaaa aacaagcatg gcctcacacc actgctactt 660
ggtatacatg agcaaaaaca gcaagtggtg aaatttttaa tcaagaaaaa agcgaattta 720
aatgcgctgg atagatatgg aagaactgct ctcatacttg ctgtatgttg tggatcagca 780
agtatagtca gccctctact tgagcaaaat gttgatgtat cttctcaaga tctggaaaga 840
cggccagaga gtatgctgtt tctagtcatc atcatgtaa                        879
```

<210> 315
<211> 292
<212> PRT
<213> Homo sapiens

<400> 315

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Met His Leu Ser Phe Pro Ala Phe Leu Pro Pro Trp Met Asp Arg Gly
                5                   10                  15

Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp His Asn Asp Ser Ser
            20                  25                  30

Val Lys Thr Leu Gly Ser Lys Arg Cys Lys Trp Cys Cys His Cys Phe
```

```
         35                  40                  45

Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val Val Ala Trp Gly Asp
     50                  55                  60

Tyr Asp Asp Ser Ala Phe Met Asp Pro Arg Tyr His Val His Gly Glu
 65                  70                  75                  80

Asp Leu Asp Lys Leu His Arg Ala Ala Trp Trp Gly Lys Val Pro Arg
                 85                  90                  95

Lys Asp Leu Ile Val Met Leu Arg Asp Thr Asp Val Asn Lys Arg Asp
            100                 105                 110

Lys Gln Lys Arg Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser
        115                 120                 125

Glu Val Val Lys Leu Val Leu Asp Arg Arg Cys Gln Leu Asn Val Leu
    130                 135                 140

Asp Asn Lys Lys Arg Thr Ala Leu Thr Lys Ala Val Gln Cys Gln Glu
145                 150                 155                 160

Asp Glu Cys Ala Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile
                165                 170                 175

Pro Asp Glu Tyr Gly Asn Thr Thr Leu His Tyr Ala Val Tyr Asn Glu
            180                 185                 190

Asp Lys Leu Met Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu
        195                 200                 205

Ser Lys Asn Lys His Gly Leu Thr Pro Leu Leu Leu Gly Ile His Glu
    210                 215                 220

Gln Lys Gln Gln Val Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu
225                 230                 235                 240

Asn Ala Leu Asp Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys
                245                 250                 255

Cys Gly Ser Ala Ser Ile Val Ser Pro Leu Leu Glu Gln Asn Val Asp
            260                 265                 270

Val Ser Ser Gln Asp Leu Glu Arg Arg Pro Glu Ser Met Leu Phe Leu
        275                 280                 285

Val Ile Ile Met
    290
```

<210> 316
<211> 584
<212> DNA
<213> Homo sapiens

<400> 316
agttgggcca aattcccctc cccctacagc ttgaagggga cataaccaat agcctggggt 60
ttttttgtgg tcctttggag atttctttgc ttatttttctt ctgggtgggg gtgattagag 120
gaggcttatc actaatagga aggggagcta tagggaggct aggatatggg ggtaagctga 180
gaggtcctcc tgtgggatgt aaatttcaag ctttgcatag tgtattctcc ttcaatgaaa 240
agaaagcttg gacataaggt atttcactcc atttgccttc cctcttacag aaaaggtcaa 300
gctgcaggat agtattgtaa tctgtacttc cctcaggtgg ccatttttcc ccatcagaga 360
gagaatgttg gggccaagcc atagtgcaga aaaaaaaatg agccacctct ttttccaggg 420
tttgtgggtc aaatttgtcc cattggctta ggatgcattt caaaggtgag cctgttgatg 480
cctgagtgtt tcccatctga aagacaaaac tgcccatggt tttggtttgt tttgtttctc 540
cccctgccca agaactatca aactcctgag ccaacaacta aaaa 584

<210> 317
<211> 829
<212> DNA
<213> Homo sapiens

<400> 317
attagcttcc gcttctgaca acactagaga tccctcccct ccctcagggt atggccctcc 60
acttcatttt tggtacataa catctttata ggacaggggt aaaatcccaa tactaacagg 120
agaatgctta ggactctaac aggtttttga gaatgtgttg gtaagggcca ctcaatccaa 180
tttttcttgg tcctccttgt ggtctaggag gacaggcaag ggtgcagatt ttcaagaatg 240
catcagtaag ggccactaaa tccgaccttc ctcgttcctc cttgtggtct gggaggaaaa 300
ctagtgtttc tgttgctgtg tcagtgagca caactattcc gatcagcagg gtccagggac 360
cactgcaggt tcttgggcag ggggagaaac aaaacaaacc aaaaccatgg gcagttttgt 420
ctttcagatg ggaaacactc aggcatcaac aggctcacct ttgaaatgca tcctaagcca 480
atgggacaaa tttgacccac aaaccctgga aaaagaggtg gctcattttt tttgcactat 540
ggcttggccc caacattctc tctctgatgg ggaaaaatgg ccacctgagg gaagtacaga 600
ttacaatact atcctgcagc ttgacctttt ctgtaagagg gaaggcaaat ggagtgaaat 660
accttatgtc caagctttct tttcattgaa ggagaataca ctatgcaaag cttgaaattt 720
acatcccaca ggaggacctc tcagcttacc cccatatcct agcctcccta tagctcccct 780
tcctattagt gataagcctc ctctaatcac ccccacccag aagaaaata 829

<210> 318
<211> 30
<212> PRT
<213> Homo sapien

<400> 318
Thr Ala Ala Ser Asp Asn Phe Gln Leu Ser Gln Gly Gly Gln Gly Phe
1 5 10 15

Ala Ile Pro Ile Gly Gln Ala Met Ala Ile Ala Gly Gln Ile
20 25 30

<210> 319
<211> 41
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR primer

<400> 319

ggcctctgcc aatgggaact cagaagtagt aaaactcctg c 41

<210> 320
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 320

gcaggagttt tactacttct gagttcccat tggcagaggc c 41

<210> 321
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 321

ggggaattcc cgctggtgcc gcgcggcagc cctatggtgg ttgaggttga 50
ttccatgccg 60

<210> 322
<211> 42
<212> DNA
<213> Artificial Sequnce

<220>
<223> PCR primer

<400> 322

cccgaattct tatttatttc tggttcttga gacattttct gg 42

<210> 323
<211> 1590
<212> DNA
<213> Homo sapiens

<400> 323
atgcatcacc atcaccatca cacggccgcg tccgataact tccagctgtc ccagggtggg 60
cagggattcg ccattccgat cgggcaggcg atggcgatcg cgggccagat caagcttccc 120

```
accgttcata tcgggcctac cgccttcctc ggcttgggtg ttgtcgacaa caacggcaac 180
ggcgcacgag tccaacgcgt ggtcgggagc gctccggcgg caagtctcgg catctccacc 240
ggcgacgtga tcaccgcggt cgacggcgct ccgatcaact cggccaccgc gatggcggac 300
gcgcttaacg ggcatcatcc cggtgacgtc atctcggtga cctggcaaac caagtcgggc 360
ggcacgcgta cagggaacgt gacattggcc gagggacccc cggccgaatt cccgctggtg 420
ccgcgcggca gccctatggt ggttgaggtt gattccatgc cggctgcttc ttctgtgaag 480
aagccatttg gtctcaggag caagatgggc aagtggtgct gccgttgctt cccctgctgc 540
agggagagcg gcaagagcaa cgtgggcact tctggagacc acgacgactc tgctatgaag 600
acactcagga gcaagatggg caagtggtgc cgccactgct tcccctgctg caggggggagt 660
ggcaagagca acgtgggcgc ttctggagac cacgacgact ctgctatgaa gacactcagg 720
aacaagatgg gcaagtggtg ctgccactgc ttcccctgct gcagggggag cggcaagagc 780
aaggtgggcg cttggggaga ctacgatgac agygccttca tggagcccag gtaccacgtc 840
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gatctcatcg tcatgctcag ggacactgac gtgaacaaga aggacaagca aaagaggact 960
gctctacatc tggcctctgc caatgggaat tcagaagtag taaaactcct gctggacaga 1020
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tgccaggaag atgaatgtgc gttaatgttg ctggaacatg gcactgatcc aaatattcca 1140
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aaagcactgc tcttatatgg tgctgatatc gaatcaaaaa acaagcatgg cctcacacca 1260
ctgttacttg gtgtacatga gcaaaaacag caagtcgtga aatttttaat caagaaaaaa 1320
gcgaatttaa atgcactgga tagatatgga aggactgctc tcatacttgc tgtatgttgt 1380
ggatcagcaa gtatagtcag ccttctactt gagcaaaata ttgatgtatc ttctcaagat 1440
ctatctggac agacggccag agagtatgct gtttctagtc atcatcatgt aatttgccag 1500
ttactttctg actacaaaga aaaacagatg ctaaaaatct cttctgaaaa cagcaatcca 1560
gaaaatgtct caagaaccag aaataaataa                                  1590
```

<210> 324
<211> 529
<212> PRT
<213> Homo sapiens

<400> 324

```
Met His His His His His His Thr Ala Ala Ser Asp Asn Phe Gln Leu
                    5                  10                  15

Ser Gln Gly Gly Gln Gly Phe Ala Ile Pro Ile Gly Gln Ala Met Ala
            20                  25                  30

Ile Ala Gly Gln Ile Lys Leu Pro Thr Val His Ile Gly Pro Thr Ala
        35                  40                  45

Phe Leu Gly Leu Gly Val Val Asp Asn Asn Gly Asn Gly Ala Arg Val
    50                  55                  60

Gln Arg Val Val Gly Ser Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr
65                  70                  75                  80

Gly Asp Val Ile Thr Ala Val Asp Gly Ala Pro Ile Asn Ser Ala Thr
                85                  90                  95

Ala Met Ala Asp Ala Leu Asn Gly His His Pro Gly Asp Val Ile Ser
            100                 105                 110
```

```
Val Thr Trp Gln Thr Lys Ser Gly Gly Thr Arg Thr Gly Asn Val Thr
        115                 120                 125

Leu Ala Glu Gly Pro Pro Ala Glu Phe Pro Leu Val Pro Arg Gly Ser
    130                 135                 140

Pro Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys
145                 150                 155                 160

Lys Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys
                165                 170                 175

Phe Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly
            180                 185                 190

Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys
        195                 200                 205

Trp Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn
    210                 215                 220

Val Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg
225                 230                 235                 240

Asn Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly
                245                 250                 255

Ser Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala
            260                 265                 270

Phe Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu
        275                 280                 285

His Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val
    290                 295                 300

Met Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr
305                 310                 315                 320

Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu
                325                 330                 335

Leu Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg
            340                 345                 350

Thr Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu
        355                 360                 365

Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly
    370                 375                 380

Asn Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala
385                 390                 395                 400
```

Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His
405 410 415

Gly Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val
420 425 430

Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg
435 440 445

Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser
450 455 460

Ile Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp
465 470 475 480

Leu Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His
485 490 495

Val Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys
500 505 510

Ile Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn
515 520 525

Lys

<210> 325
<211> 1155
<212> DNA
<213> Homo sapiens

<400> 325
atggtggctg aggtttgttc aatgcccact gcctctactg tgaagaagcc atttgatctc 60
aggagcaaga tgggcaagtg gtgccaccac cgcttcccct gctgcagggg gagcggcaag 120
agcaacatgg gcacttctgg agaccacgac gactccttta tgaagatgct caggagcaag 180
atgggcaagt gttgccgcca ctgcttcccc tgctgcaggg ggagcggcac gagcaacgtg 240
ggcacttctg gagaccatga aaactccttt atgaagatgc tcaggagcaa gatgggcaag 300
tggtgctgtc actgcttccc ctgctgcagg gggagcggca agagcaacgt gggcgcttgg 360
ggagactacg accacagcgc cttcatggag ccgaggtacc acatccgtcg agaagatctg 420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg 480
ctcagggaca ctgacatgaa caagagggac aaggaaaaga ggactgctct acatttggcc 540
tctgccaatg gaaattcaga agtagtacaa ctcctgctgg acagacgatg tcaacttaat 600
gtccttgaca acaaaaaaag gacagctctg ataaaggcca tacaatgcca ggaagatgaa 660
tgtgtgttaa tgttgctgga acatggcgct gatcgaaata ttccagatga gtatggaaat 720
accgctctac actatgctat ctacaatgaa gataaattaa tggccaaagc actgctctta 780
tatggtgctg atattgaatc aaaaaacaag gttggcctca caccactttt gcttggcgta 840
catgaacaaa aacagcaagt ggtgaaattt ttaatcaaga aaaaagctaa tttaaatgta 900
cttgatagat atggaaggac tgccctcata cttgctgtat gttgtggatc agcaagtata 960
gtcaatcttc tacttgagca aaatgttgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gtgaattact ttctgactat 1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaaa tgtctcaaga 1140
accagaaata aataa 1155

<210> 326
<211> 384
<212> PRT
<213> Homo sapiens

<400> 326
Met Val Ala Glu Val Cys Ser Met Pro Thr Ala Ser Thr Val Lys Lys
1 5 10 15

Pro Phe Asp Leu Arg Ser Lys Met Gly Lys Trp Cys His His Arg Phe
20 25 30

Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Met Gly Thr Ser Gly Asp
35 40 45

His Asp Asp Ser Phe Met Lys Met Leu Arg Ser Lys Met Gly Lys Cys
50 55 60

Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Thr Ser Asn Val
65 70 75 80

Gly Thr Ser Gly Asp His Glu Asn Ser Phe Met Lys Met Leu Arg Ser
85 90 95

Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
100 105 110

Gly Lys Ser Asn Val Gly Ala Trp Gly Asp Tyr Asp His Ser Ala Phe
115 120 125

Met Glu Pro Arg Tyr His Ile Arg Arg Glu Asp Leu Asp Lys Leu His
130 135 140

Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145 150 155 160

Leu Arg Asp Thr Asp Met Asn Lys Arg Asp Lys Glu Lys Arg Thr Ala
165 170 175

Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Gln Leu Leu
180 185 190

Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
195 200 205

Ala Leu Ile Lys Ala Ile Gln Cys Gln Glu Asp Glu Cys Val Leu Met
210 215 220

Leu Leu Glu His Gly Ala Asp Arg Asn Ile Pro Asp Glu Tyr Gly Asn
225 230 235 240

Thr Ala Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
245 250 255

Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys Val Gly
260 265 270

Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
275 280 285

Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Val Leu Asp Arg Tyr
290 295 300

Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305 310 315 320

Val Asn Leu Leu Leu Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu
325 330 335

Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
340 345 350

Ile Cys Glu Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
355 360 365

Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
370 375 380

<210> 327
<211> 634
<212> DNA
<213> Homo sapiens

<400> 327
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acaatgccag gaagatgaat gtgcgttaat gttgctggaa catggcactg atccgaatat 180
tccagatgag tatggaaata ccgctctaca ctatgctatc tacaatgaag ataaattaat 240
ggccaaagca ctgctcttat acggtgctga tatcgaatca aaaaacaagc atggcctcac 300
accactgtta cttggtgtac atgagcaaaa acagcaagtg gtgaaatttt taatcaagaa 360
aaaagcaaat ttaaatgcac tggatagata tggaagaact gctctcatac ttgctgtatg 420
ttgtggatcg gcaagtatag tcagccttct acttgagcaa aacattgatg tatcttctca 480
agatctatct ggacagacgg ccagagagta tgctgtttct agtcgtcata atgtaatttg 540
ccagttactt tctgactaca aagaaaaaca gatactaaaa gtctcttctg aaaacagcaa 600
tccaggaaat gtctcaagaa ccagaaataa ataa 634

<210> 328
<211> 1155
<212> DNA
<213> Homo sapiens

<400> 328
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agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag 180
atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg 240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag 300
tggtgctgcc actgcttccc ctgctgcagg gggagcagca agagcaaggt gggcgcttgg 360

ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg 420
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ctcagggaca ctgacgtgaa caagcaggac aagcaaaaga ggactgctct acatctggcc 540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat 600
gtccttgaca acaaaaagag gacagctctg ataaaggccg tacaatgcca ggaagatgaa 660
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ctggatagat atggaaggac tgctctcata cttgctgtat gttgtggatc agcaagtata 960
gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac 1080
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accagaaata aataa 1155

<210> 329
<211> 1155
<212> DNA
<213> Homo sapiens

<400> 329
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agcaacatgg gcacttctgg agaccacgac gactccttta tgaagacgct caggagcaag 180
atgggcaagt gttgccacca ctgcttcccc tgctgcaggg ggagcggcac gagcaatgtg 240
ggcacttctg gagaccatga caactccttt atgaagacac tcaggagcaa gatgggcaag 300
tggtgctgtc actgcttccc ctgctgcagg gggagcggca agagcaacgt gggcacttgg 360
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gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg 480
ctcagggaca ctgacatgaa caagagggac aagcaaaaga ggactgctct acatttggcc 540
tctgccaatg gaaattcaga agtagtacaa ctcctgctgg acagacgatg tcaacttaac 600
gtccttgaca acaaaaaaag gacagctctg ataaaggccg tacaatgcca ggaagatgaa 660
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accgctctac actatgctat ctacaatgaa gataaattaa tggccaaagc actgctctta 780
tatggtgctg atattgaatc aaaaaacaag tgtggcctca caccactttt gcttggcgta 840
catgaacaaa aacagcaagt ggtgaaattt ttaatcaaga aaaaagctaa tttaaatgca 900
cttgatagat atggaagaac tgccctcata cttgctgtat gttgtggatc agcaagtata 960
gtcaatcttc tacttgagca aaatgttgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gtgaattact ttctgactat 1080
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accagaaata aataa 1155

<210> 330
<211> 1155
<212> DNA
<213> Homo sapiens

<400> 330
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agcaacatgg gcacttctgg agaccacgac gactccttta tgaagatgct caggagcaag 180
atgggcaagt gttgccgcca ctgcttcccc tgctgcaggg ggagcggcac gagcaacgtg 240
ggcacttctg gagaccatga aaactccttt atgaagatgc tcaggagcaa gatgggcaag 300
tggtgctgtc actgcttccc ctgctgcagg gggagcggca agagcaacgt gggcgcttgg 360

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ggagactacg accacagcgc cttcatggag ccgaggtacc acatccgtcg agaagatctg 420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg 480
ctcagggaca ctgacatgaa caagagggac aaggaaaaga ggactgctct acatttggcc 540
tctgccaatg gaaattcaga agtagtacaa ctcctgctgg acagacgatg tcaacttaat 600
gtccttgaca acaaaaaaag gacagctctg ataaaggcca tacaatgcca ggaagatgaa 660
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tatggtgctg atattgaatc aaaaaacaag tgtggcctca caccactttt gcttggcgta 840
catgaacaaa aacagcaagt ggtgaaattt ttaatcaaga aaaaagctaa tttaaatgta 900
cttgatagat atggaagaac tgccctcata cttgctgtat gttgtggatc agcaagtata 960
gtcaatcttc tacttgagca aaatgttgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gtgaattact ttctgactat 1080
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accagaaata aataa                                                  1155
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<210> 331
<211> 210
<212> PRT
<213> Homo sapiens

<400> 331

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Thr Ala Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys
                  5                  10                  15

Leu Leu Leu Asp Arg Arg Cys Gln Leu Asn Ile Leu Asp Asn Lys Lys
             20                  25                  30

Arg Thr Ala Leu Thr Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala
         35                  40                  45

Leu Met Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr
     50                  55                  60

Gly Asn Thr Ala Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met
 65                  70                  75                  80

Ala Lys Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys
                 85                  90                  95

His Gly Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln
            100                 105                 110

Val Val Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp
        115                 120                 125

Arg Tyr Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala
    130                 135                 140

Ser Ile Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln
145                 150                 155                 160

Asp Leu Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser Arg His
                165                 170                 175
```

```
Asn Val Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Ile Leu
          180                 185                 190

Lys Val Ser Ser Glu Asn Ser Asn Pro Gly Asn Val Ser Arg Thr Arg
        195                 200                 205

Asn Lys
    210


<210> 332
<211> 384
<212> PRT
<213> Homo sapiens

<400> 332
Met Val Ala Glu Val Cys Ser Met Pro Thr Ala Ser Thr Val Lys Lys
                  5                  10                  15

Pro Phe Asp Leu Arg Ser Lys Met Gly Lys Trp Cys His His Arg Phe
             20                  25                  30

Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Met Gly Thr Ser Gly Asp
         35                  40                  45

His Asp Asp Ser Phe Met Lys Met Leu Arg Ser Lys Met Gly Lys Cys
     50                  55                  60

Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Thr Ser Asn Val
 65                  70                  75                  80

Gly Thr Ser Gly Asp His Glu Asn Ser Phe Met Lys Met Leu Arg Ser
                 85                  90                  95

Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
            100                 105                 110

Gly Lys Ser Asn Val Gly Ala Trp Gly Asp Tyr Asp His Ser Ala Phe
        115                 120                 125

Met Glu Pro Arg Tyr His Ile Arg Arg Glu Asp Leu Asp Lys Leu His
    130                 135                 140

Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145                 150                 155                 160

Leu Arg Asp Thr Asp Met Asn Lys Arg Asp Lys Glu Lys Arg Thr Ala
                165                 170                 175

Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Gln Leu Leu
            180                 185                 190

Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
        195                 200                 205
```

```
Ala Leu Ile Lys Ala Ile Gln Cys Gln Glu Asp Glu Cys Val Leu Met
    210                 215                 220

Leu Leu Glu His Gly Ala Asp Arg Asn Ile Pro Asp Glu Tyr Gly Asn
225                 230                 235                 240

Thr Ala Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
                245                 250                 255

Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys Cys Gly
            260                 265                 270

Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
        275                 280                 285

Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Val Leu Asp Arg Tyr
    290                 295                 300

Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305                 310                 315                 320

Val Asn Leu Leu Leu Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu
                325                 330                 335

Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
            340                 345                 350

Ile Cys Glu Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
        355                 360                 365

Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
    370                 375                 380
```


<210> 333
<211> 384
<212> PRT
<213> Homo sapiens

<400> 333

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Met Val Ala Glu Val Cys Ser Met Pro Ala Ala Ser Ala Val Lys Lys
                  5                  10                  15

Pro Phe Asp Leu Arg Ser Lys Met Gly Lys Trp Cys His His Arg Phe
             20                  25                  30

Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Met Gly Thr Ser Gly Asp
         35                  40                  45

His Asp Asp Ser Phe Met Lys Thr Leu Arg Ser Lys Met Gly Lys Cys
     50                  55                  60

Cys His His Cys Phe Pro Cys Cys Arg Gly Ser Gly Thr Ser Asn Val
```

65 70 75 80

Gly Thr Ser Gly Asp His Asp Asn Ser Phe Met Lys Thr Leu Arg Ser
85 90 95

Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
100 105 110

Gly Lys Ser Asn Val Gly Thr Trp Gly Asp Tyr Asp Asp Ser Ala Phe
115 120 125

Met Glu Pro Arg Tyr His Val Arg Arg Glu Asp Leu Asp Lys Leu His
130 135 140

Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145 150 155 160

Leu Arg Asp Thr Asp Met Asn Lys Arg Asp Lys Gln Lys Arg Thr Ala
165 170 175

Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Gln Leu Leu
180 185 190

Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
195 200 205

Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Val Leu Met
210 215 220

Leu Leu Glu His Gly Ala Asp Gly Asn Ile Gln Asp Glu Tyr Gly Asn
225 230 235 240

Thr Ala Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
245 250 255

Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys Cys Gly
260 265 270

Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
275 280 285

Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
290 295 300

Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305 310 315 320

Val Asn Leu Leu Leu Glu Gln Asn Val Asp Val Ser Ser Gln Asp Leu
325 330 335

Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
340 345 350

Ile Cys Glu Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile

```
        355                 360                 365

Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
    370                 375                 380


<210> 334
<211> 384
<212> PRT
<213> Homo sapiens

<400> 334
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
                  5                  10                  15

Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
             20                  25                  30

Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
         35                  40                  45

His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
     50                  55                  60

Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
 65                  70                  75                  80

Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
                 85                  90                  95

Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
            100                 105                 110

Ser Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
        115                 120                 125

Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
    130                 135                 140

Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145                 150                 155                 160

Leu Arg Asp Thr Asp Val Asn Lys Gln Asp Lys Gln Lys Arg Thr Ala
                165                 170                 175

Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
            180                 185                 190

Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
        195                 200                 205

Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
    210                 215                 220
```

```
Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225                 230                 235                 240

Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
                245                 250                 255

Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
            260                 265                 270

Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
        275                 280                 285

Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
    290                 295                 300

Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305                 310                 315                 320

Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
                325                 330                 335

Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
            340                 345                 350

Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
        355                 360                 365

Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
    370                 375                 380
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<210> 335
<211> 1185
<212> DNA
<213> Homo sapiens

<400> 335
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agcaacgtgg gcacttctgg agaccacgac gactctgcta tgaagacact caggagcaag 180
atgggcaagt ggtgccgcca ctgcttcccc tgctgcaggg ggagtggcaa gagcaacgtg 240
ggcgcttctg gagaccacga cgactctgct atgaagacac tcaggaacaa gatgggcaag 300
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ggagactacg atgacagtgc cttcatggag cccaggtacc acgtccgtgg agaagatctg 420
gacaagctcc acagagctgc ctggtggggt aaagtcccca gaaaggatct catcgtcatg 480
ctcagggaca ctgacgtgaa caagaaggac aagcaaaaga ggactgctct acatctggcc 540
tctgccaatg ggaattcaga agtagtaaaa ctcctgctgg acagacgatg tcaacttaat 600
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tgtgcgttaa tgttgctgga acatggcact gatccaaata ttccagatga gtatggaaat 720
accactctgc actacgctat ctataatgaa gataaattaa tggccaaagc actgctctta 780
tatggtgctg atatcgaatc aaaaaacaag catggcctca caccactgtt acttggtgta 840
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gtcagccttc tacttgagca aaatattgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat catgtaattt gccagttact ttctgactac 1080
aaagaaaaac agatgctaaa aatctcttct gaaaacagca atccagaaaa tgtctcaaga 1140
accagaaata aacatcatca ccatcatcat caccatcacc attaa 1185

<210> 336
<211> 394
<212> PRT
<213> Homo sapiens

<400> 336
Met Val Val Glu Val Asp Ser Met Pro Ala Ala Ser Ser Val Lys Lys
5 10 15

Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Cys Arg Cys Phe
20 25 30

Pro Cys Cys Arg Glu Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
35 40 45

His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
50 55 60

Cys Arg His Cys Phe Pro Cys Cys Arg Gly Ser Gly Lys Ser Asn Val
65 70 75 80

Gly Ala Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Asn
85 90 95

Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
100 105 110

Gly Lys Ser Lys Val Gly Ala Trp Gly Asp Tyr Asp Asp Ser Ala Phe
115 120 125

Met Glu Pro Arg Tyr His Val Arg Gly Glu Asp Leu Asp Lys Leu His
130 135 140

Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145 150 155 160

Leu Arg Asp Thr Asp Val Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
165 170 175

Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
180 185 190

Leu Asp Arg Arg Cys Gln Leu Asn Val Leu Asp Asn Lys Lys Arg Thr
195 200 205

Ala Leu Ile Lys Ala Val Gln Cys Gln Glu Asp Glu Cys Ala Leu Met
210 215 220

Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn

225 230 235 240

Thr Thr Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
245 250 255

Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
260 265 270

Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
275 280 285

Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
290 295 300

Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305 310 315 320

Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
325 330 335

Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His His Val
340 345 350

Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Ile
355 360 365

Ser Ser Glu Asn Ser Asn Pro Glu Asn Val Ser Arg Thr Arg Asn Lys
370 375 380

His His His His His His His His His His
385 390

<210> 337
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 337
cggcggatcc accatggtgg ttgaggttga ttcc 34

<210> 338
<211> 74
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 338
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agacattttc tgga 74

<210> 339
<211> 1166
<212> DNA
<213> Homo sapiens

<400> 339
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agaagcaaga tgggcaagtg gtgccgccac tgcttccgct ggtgcagggg gagcggcaag 120
agcaacgtgg gcacttctgg agaccacgac gattctgcta tgaagacact caggagcaag 180
atgggcaagt ggtgccgcca ctgcttcccc tggtgcaggg ggagcagcaa gagcaacgtg 240
ggcacttctg gagaccacga cgactctgct atgaagacac tcaggagcaa gatgggcaag 300
tggtgctgcc actgcttccc ctgctgcagg gggagcggca agagcaaagt gggcccttgg 360
ggagactacg acgacagcgc tttcatggag ccgaggtacc acgtccgtcg agaagatctg 420
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atccttgaca acaaaaagag gacagctctg acaaaggccg tacaatgccg ggaagatgaa 660
tgtgcgttaa tgttgctgga acatggcact gatccgaata ttccagatga gtatggaaat 720
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catgagcaaa aacagcaagt ggtgaaattc ttaatcaaga aaaaagcaaa tttaaatgca 900
ctggatagat atggaagaac tgctctcata cttgctgtat gttgtggatc ggcaagtata 960
gtcagccttc tacttgagca aaacattgat gtatcttctc aagatctatc tggacagacg 1020
gccagagagt atgctgtttc tagtcatcat aatgtaattt gccagttact ttctgactac 1080
aaagaaaaac agatgctaaa agtctcttct gaaaacagca atccaggaaa tgtctcaaga 1140
accagaaata aataagggtg gtgata 1166

<210> 340
<211> 384
<212> PRT
<213> Homo sapiens

<400> 340
Met Val Ala Glu Ala Gly Ser Met Pro Ala Ala Ser Ser Val Lys Lys
1 5 10 15

Pro Phe Gly Leu Arg Ser Lys Met Gly Lys Trp Cys Arg His Cys Phe
20 25 30

Pro Trp Cys Arg Gly Ser Gly Lys Ser Asn Val Gly Thr Ser Gly Asp
35 40 45

His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser Lys Met Gly Lys Trp
50 55 60

Cys Arg His Cys Phe Pro Trp Cys Arg Gly Ser Ser Lys Ser Asn Val
65 70 75 80

Gly Thr Ser Gly Asp His Asp Asp Ser Ala Met Lys Thr Leu Arg Ser

```
                85                  90                  95
Lys Met Gly Lys Trp Cys Cys His Cys Phe Pro Cys Cys Arg Gly Ser
            100                 105                 110

Gly Lys Ser Lys Val Gly Pro Trp Gly Asp Tyr Asp Asp Ser Ala Phe
        115                 120                 125

Met Glu Pro Arg Tyr His Val Arg Arg Glu Asp Leu Asp Lys Leu His
    130                 135                 140

Arg Ala Ala Trp Trp Gly Lys Val Pro Arg Lys Asp Leu Ile Val Met
145                 150                 155                 160

Leu Lys Asp Thr Asp Met Asn Lys Lys Asp Lys Gln Lys Arg Thr Ala
                165                 170                 175

Leu His Leu Ala Ser Ala Asn Gly Asn Ser Glu Val Val Lys Leu Leu
            180                 185                 190

Leu Asp Arg Arg Cys Gln Leu Asn Ile Leu Asp Asn Lys Lys Arg Thr
        195                 200                 205

Ala Leu Thr Lys Ala Val Gln Cys Arg Glu Asp Glu Cys Ala Leu Met
    210                 215                 220

Leu Leu Glu His Gly Thr Asp Pro Asn Ile Pro Asp Glu Tyr Gly Asn
225                 230                 235                 240

Thr Ala Leu His Tyr Ala Ile Tyr Asn Glu Asp Lys Leu Met Ala Lys
                245                 250                 255

Ala Leu Leu Leu Tyr Gly Ala Asp Ile Glu Ser Lys Asn Lys His Gly
            260                 265                 270

Leu Thr Pro Leu Leu Leu Gly Val His Glu Gln Lys Gln Gln Val Val
        275                 280                 285

Lys Phe Leu Ile Lys Lys Lys Ala Asn Leu Asn Ala Leu Asp Arg Tyr
    290                 295                 300

Gly Arg Thr Ala Leu Ile Leu Ala Val Cys Cys Gly Ser Ala Ser Ile
305                 310                 315                 320

Val Ser Leu Leu Leu Glu Gln Asn Ile Asp Val Ser Ser Gln Asp Leu
                325                 330                 335

Ser Gly Gln Thr Ala Arg Glu Tyr Ala Val Ser Ser His His Asn Val
            340                 345                 350

Ile Cys Gln Leu Leu Ser Asp Tyr Lys Glu Lys Gln Met Leu Lys Val
        355                 360                 365

Ser Ser Glu Asn Ser Asn Pro Gly Asn Val Ser Arg Thr Arg Asn Lys
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370 375 380